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I have checked with various people in our shop and no one remembers receiving a new book.

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If there are any problems or questions please feel free to contact me.

Sinserely yours,

Tony Esposito

Tony Esposito
V.P. Director of Typography

V-I-P Keyboard Operation

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V-I-P Training Manual
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V-I-P KEYBOARD OPERATION

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Test

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All answers have been placed in the back of the book except in cases of extremely difficult problems, in which case answers appear immediately after questions.

V-I-P KEYBOARD OPERATION

The V-I-P operator is essentially a craftsman or (craftsperson). With the V-I-P as a tool, he or she composes and assembles type varying from six to seventy–two points in size and lines to forty–five picas in length with the proper equipment. All of the intricacies and niceties of typographic composition must be controlled by the operator's knowledge, the results of skilful use of the machine.

The experience of years has pointed out some of the qualifications which must be possessed by the student who would become a capable V-I-P operator. Foremost among these is a good working knowledge of printing including typographical layout. Familiarity with printers' customs and knowledge of typefaces are essential.

Equal in importance is the matter of education. Experience shows that the equivalent of a high school education is necessary, but whatever else is possessed, a practical understanding of the language to be set is essential. The operator must understand grammatical construction, capitalization, division of words, accents, and proper punctuation in order to become a skilled typesetter.

The operator's work consists chiefly in reading copy and fingering the keyboard. To read and interpret copy requires a degree of general education and knowledge of printing which it is assumed that the student possesses, else he would not have taken up this study. If he has not had adequate instruction or experience in hand composition, it would be advisable for him to study the typical arrangement of types before proceeding with the study of the V-I-P.

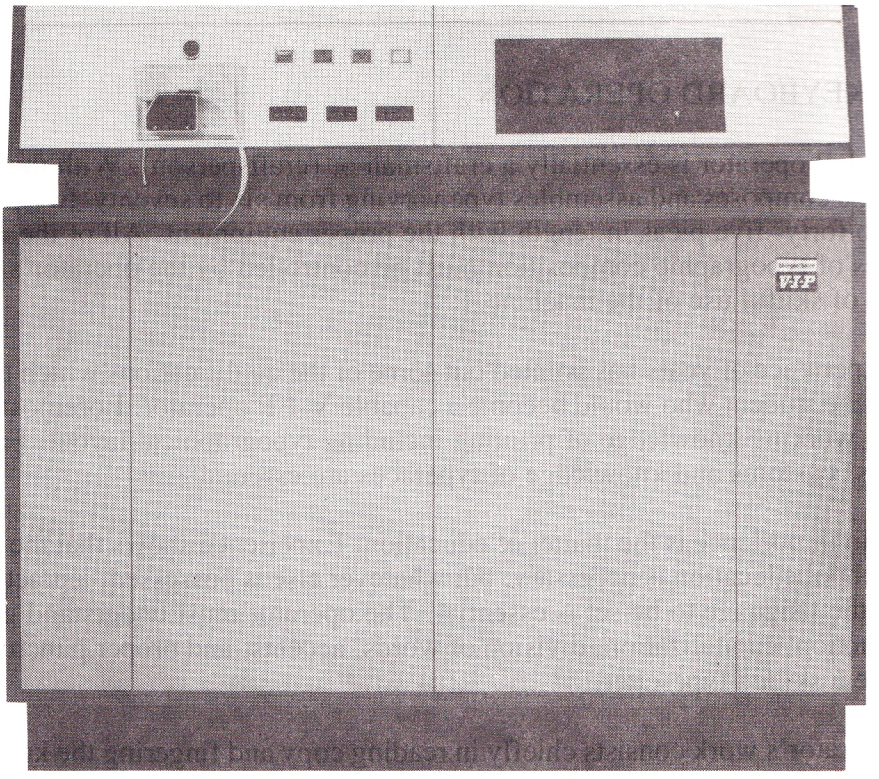
To all V-I-P operators, especially beginners, the attainment of a high rate of speed, with accuracy, is the ultimate goal. Several steps are necessary in order to reach the highest point of efficiency in keyboard manipulation.

1. Familiarity with the keyboard is the first essential. The fingers must be trained so that the key buttons may be touched without conscious effort on the part of the operator. A mental picture of the keyboard, which is only attained by accurate memorization, should always be before the eyes of the operator, obviating the necessity of constantly looking directly at the key buttons.

2. Follow the system as outlined. Mastery of the keyboard may be attained by following faithfully the coding systems given in this book. This system provides the beginner with basic principles by which speed may be developed.

3. Proper application. Besides being familiar with the layout of the keyboard, the operator, to become swift, must be able to read copy quickly and intelligently, and have a good working knowledge of the functions of the machine.

Evenness or steadiness in operating is fundamental, if an operator desires to become rapid, and can only be attained by the student training himself to read his copy as he manipulates the key buttons, without variation of motion.



After the student has reached the point of confidence he should at once try to operate without looking at the keyboard. At first he will make errors and will not set as much matter. He will never become a proficient operator unless he starts correctly. If an operator persistently endeavors to input without looking at the keyboard, in a short time he will be able to keep his eyes on his copy. Then will come steadiness in operating. Instead of setting two or three words very rapidly, then stopping to look at the copy and back to the keyboard, the operator will be working at a steady pace all the time, and at the end of the day the result will be a satisfactory output.

Character Location. The student should continue to make a careful study of his keyboard even after he has become a fairly capable operator. He should study the location of the pi characters and the points; familiarize himself with different keyboard layouts.

Errors Common to Operators. Many operators, in their desire to "hang the keyboard," have acquired the bad habit of sending up the lines as soon as they think they have enough spacebands therein to space them out. The result, of course, is wide spacing, an indication of slovenly workmanship not tolerated in first-class shops. Accuracy in spelling, uniformity in capitalization, correct division of words, and punctuation, are very important adjuncts to a productive output of V-I-P composition. Production in the shop is measured in terms of corrected galleys, thus speed with errors is not speed at all. Many shops will not permit the division of words at the end of three consecutive lines, and at times the careful operator will go back three or four lines to obtain proper spacing. It is not considered good printing to begin or end three or more lines in succession with the same word. These comments are given to offset the impression that speed is the only qualification necessary to make the competent machine operator. Accuracy and good spacing must be the primary considerations.

Do not try to move the fingers faster than they can touch the right key buttons. To do so will cause confusion and a loss of time. When starting on a "take," go slowly; note any instructions about setting, then start, maintaining an even, steady motion.

Commands

All V-I-P commands begin with the TTS Bell code. In this manual we express the Bell as a ℬ. You may wish to write the Bell as a @ as a form of shorthand.

Also note that certain commands are followed by numeric information—in all cases a *fixed* number of digits. For instance

ℬl □□□□

for line length, requires four digits. Every location must be accounted for (by using zeros if necessary).

Note that there are *no* spaces within a command. Do not separate the ℬ, alpha mnemonics or digits within a command.

Never input a Bell code alone
and *always* check the letters required
and the number of digits that must be present

On the following pages you will find
a complete list of all Bell codes
in alphabetical order followed by pages
that can be cut into individual flash cards
of commands. Use these to memorize
the Bell commands as you encounter them.

Alphabetical Listing of Bell Codes

A	Drum A
B	Drum B
C	Drum C
D	Automatic Leadering
E	Allow Hyphenation
F	Film Advance
G	Cancel Hyphenation
HL	Hanging Indent Left
HR	Hanging Indent Right
IF	Immediate Film Advance
IL	Indent Left
IR	Indent Right
J	Justified Input
K	Allow Letterspacing
L	Line Measure
M.	Supplementary Film Advance (add)
M,	Supplementary Film Advance (subtract)
MP	Remember Point in Copy
N	Non-justified Input
OL	Text Indent Left
OR	Text Indent Right
OX	Cancel Text Indent
P	Point Size
QE	End Stored Format
QS	Store Format
QU	Use Stored Format
RC	Ragged Center
RF	Immediate Reverse Film
RL	Ragged Left
RP	Return to Remembered Point
RR	Ragged Right
RX	Clear Ragged Setting
S	Stop
TA	Average Spaceband
TL	Maximum Spaceband Before Letterspacing
TM	Maximum Spaceband Before Hyphenation
TN	Minimum Spaceband
U	Begin Tabulation Columns
V	Wire Stripping
W	Conditional Control
X	Set Tabulation
Y	End Set Tabulation
Z	Suspend Tabulation
8	Flash
9	No Flash
$	Character Tighten
$N	Disenable Script Option
$S	Enable Script Option
.	Increase Character Width
,	Decrease Character Width
-	Discretionary Hyphen
'	Supplementary Line Length

FUNCTION

Format Storage

ACTION/EXAMPLE

NUMBER

Bell QS ☐☐

01-99

to begin storing 40 total codes or characters.

Bell QE
to end the stored format.

NUMBER

Bell QU ☐☐

01-99

to use a stored format.

Merge (TTS Return Code)

to merge into and out of stored formats.

FUNCTION

Point Size Change

ACTION

POINTS

Bell P ☐☐

01-72

Each of the two digits must be accounted for.

Check point sizes available on your machine.

If an "illegal" point size is requested, the machine will go to 6 point.

FUNCTION

Line Measure Change

ACTION

PICAS POINTS

Bell L ☐☐ ☐☐

0000-4500

Each of the four digits must be accounted for.

FUNCTION

Film Advance Change

ACTION/EXAMPLE

POINTS ½ PTS

Bell F ☐☐ ☐

00-99 0 or 1

Each of the three digits must be accounted for.

FUNCTION

Hanging Indent

ACTION

Bell HL ☐☐ ☐☐
PICAS POINTS
0000-4500

or **HR**
for left or right hanging indent.

Bell HL 0000
or **HR**
will cancel the command.

FUNCTION

Tabulation

ACTION/EXAMPLE

Bell X ☐☐☐☐ ☐☐☐☐
PICAS 0000-4500 POINTS 0000-4500

...Bell Y
Up to 20 column widths may be specified.

Bell U
to begin a new set of columns (always returns you to start of column one)

Bell Z
to suspend all tabular. Bell U will reinstate.

QL, QR, QC, ELEVATE
ends each column. Use QL alone to skip a column.

FUNCTION

Hyphenation

ACTION

Bell E
will allow hyphenation.

Bell G
will cancel hyphenation.

FUNCTION

Spaceband Set

ACTION/EXAMPLE

Bell TN ☐ (3)
UNITS 1-9
to set the minimum spaceband value.

Bell TM ☐☐ (9)
UNITS 01-99
to set the maximum value before hyphenation.

Bell TL ☐☐ (9)
UNITS 01-99
to set the maximum value before letter-spacing.

Bell TA ☐☐ (6)
UNITS 01-99
to set the average value (used in quadded lines).

All values are in effect until cancelled by tape command.

FUNCTION

Automatic Leadering

ACTION/EXAMPLE

Bell D (Shift) ☐
CHARACTER

to automatically repeat an output character such as EN leader or EN space.

Doublecheck shift (or supershift) condition.

To fill out line, end command with ELEVATE.

FUNCTION

Indent

ACTION/EXAMPLE

PICAS POINTS

Bell IL ☐☐ ☐☐
or **IR** 0000-4500
for left or right indent. Both may be used in one line.

Bell IL 0000
or **IR**
will cancel the command.

FUNCTION

Stop

ACTION/EXAMPLE

Bell S
Must end every tape to stop machine operation.

FUNCTION

Font Change

ACTION

Bell ☐
1-6
on one drum machines.

Bell A ☐
B 1-6
C
on three drum machines.

FUNCTION

Character Width

ACTION

9THS OF PT

Bell **.** ☐☐

PERIOD 00-64

to increase character width.

9THS OF PT

Bell **,** ☐☐

COMMA 00-64

to decrease character width.

Bell . 00 or
Bell , 00
will cancel each command

FUNCTION

Supplementary Film Advance

ACTION

POINTS ½ PTS

Bell **M** ☐☐ ☐.

00-99 0 or 1 PERIOD

will add film advance (leading) specified to next line *only*.

POINTS ½ PTS

Bell **M** ☐☐ ☐,

00-99 0 or 1 COMMA

will subtract film advance (leading) from next line *only*.

FUNCTION

Supplementary Line Length

ACTION

PICAS POINTS

Bell **'** ☐☐ ☐☐

0000-4500

adds the value specified to one line *only*.

FUNCTION

Immediate Film Advance

ACTION/EXAMPLE

POINTS ½ PTS

Bell **IF** ☐☐ ☐

00-99 0 or 1

Film will advance immediately.

FUNCTION

Flash/No Flash

ACTION/EXAMPLE

Bell 8
for flash character.

Bell 9
for no flash character.

Each remains in effect until cancelled by the other.

FUNCTION

Discretionary Hyphen

ACTION

Bell -
indicates acceptable hyphenation point.

If placed in front of word, no hyphenation will be allowed.

Bell E must be in effect.

FUNCTION

Indent Text

ACTION/EXAMPLE

Bell OL or OR
to indicate indent on left or right at present text point.

Bell OX
cancels command.

FUNCTION

Indent Text

ACTION/EXAMPLE

Bell OL or OR
to indicate indent on left or right at present text point.

Bell OX
cancels command.

FUNCTION

Ragged Setting

ACTION/EXAMPLE

Bell RL
for ragged left.
(end text with QR)

Bell RR
for ragged right.
(end text with QL)

Bell RC
for ragged center.
(end text with QC)

Bell RX
to cancel or clear
ragged setting.

FUNCTION

Conditional Control

ACTION/EXAMPLE

	NO. LINES	FORMAT NO.
Bell W	☐☐	☐☐
	00-99	00-99

This command links
to a stored format
at the end of
the line count
specified in the
first part of
the command.
Command takes
effect at any
quad command.

FUNCTION

Letterspacing

ACTION

	REL. UNITS
Bell K	☐
	0-9

will allow letter-
spacing.

Bell KO
will cancel
letterspacing.

This command
uses increments
of 1/18th of a
point.

FUNCTION

Script Command

ACTION/EXAMPLE

Bell $S
enables script
option.

Bell $N
disenables script
option. Remember
to reactivate
letterspacing.

FUNCTION

Remember Point in Copy

ACTION/EXAMPLE

Bell MP

Must be set up
within tab format.

FUNCTION

Return to Remember Point

ACTION/EXAMPLE

Bell RP ☐☐

0-19 (columns)

Must be set up
within tab format

FUNCTION

Immediate Reverse Film

ACTION/EXAMPLE

POINTS ½ PTS

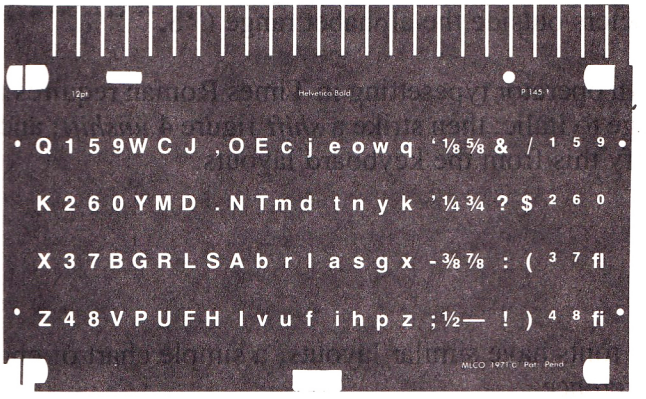
Bell RF ☐☐ ☐

To reverse lead the
specified amount. Reverse
lead option must be
in V-I-P.

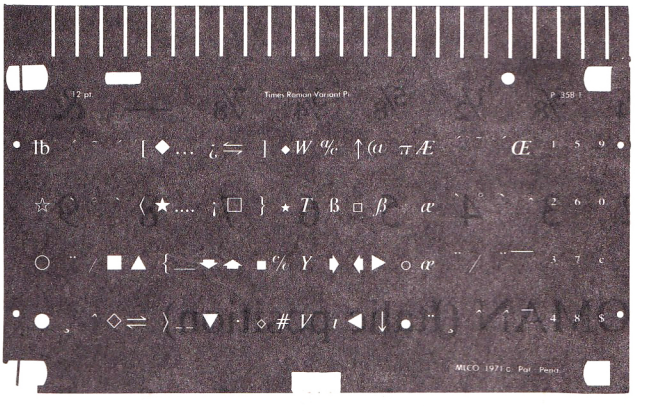
The Keyboard Layout

The beginning keyboard operator must first understand that symbols on the keyboard keys are *not* a guarantee that the character thus represented will be typeset if the key is pressed.

Each key when struck produces a combination of holes in paper tape forming a code frame (or frames). This code controls the V-I-P output in such a way as to produce whatever character lies at the font grid position represented by that code frame (or frames).



Should the V-I-P's font grid in use be changed to a pi grid for instance; then, whatever outside character lies in the same position on the new master grid would be typeset. Below, the symbol "●" lies at the same relative position as the letter "Z" above. Therefore, if the font grid below was substituted for the alphabet font grid above, when the letter "Z" was keyed a "●" would be typeset. Remember, the grid in use on the V-I-P determines what the keyboard keys will produce, *not* the symbols on the keys.



On some grid layouts, extraneous characters, such as "&," "$," etc., are located in positions different from the so-called standard layout. In addition, some plants employ computer programs which, again, cause the V-I-P to interpret certain codes as being different than what one would expect from either the grid layout or any keyboard layouts in use. Always verify the meaning of a keyboard before using it. This is done by first consulting the keyboard layout for the plant's typeface grids in use; and then, making sure that the program in use does not interrupt the meaning of the keyboard code before it is translated into what lies on the grid.

However, assuming that no special program is in use—it is easy to see that it is not possible to retain in your memory the alternate meanings of any given keyboard key. Many plants use keyboard layouts indicating what symbols or characters can be produced using a particular font grid. Two such keyboard layouts are included at the beginning of this manual. Turn to the Italic layout and note which symbol occupies the *shift* figure 4 position: the "%" sign, right? Turn to the Roman layout and observe which symbol occupies that same location in a Roman typeface. It is not the "%," but the "½." Therefore, as said before, consult the font grid or keyboard layouts before striking any key to obtain characters outside the alphabet range ("$," "%," "*," "&" and others).

An example: An operator typesetting in Times Roman requires a "%" sign. That person must first change to Italic; then strike a *shift* figure 4 *unshift*; and then return to the Roman font grid. Verify this from the keyboard layouts.

Pi characters

If most of your fonts have similar layouts, a simple chart of character exceptions can be made up for reference.

For instance

TIMES ROMAN (Roman position)

fi	1	2	3	4	5	6	7	8	9	0	fl	/
!	⅛	¼	⅜	½	⅝	¾	⅞	—	&	?	:	(
$	1	2	3	4	5	6	7	8	9	0	;	)

TIMES ROMAN (Italic position)

fi	1	2	3	4	5	6	7	8	9	0	*fl*	/
!	*	§	⅓	%	⅔	†	‡	–	*&*	*?*	*:*	*(*
$	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*0*	*;*	*)*

In other cases a more expanded chart would have to be made up indicating Unshift, Shift and Supershift characters.

P145-1

P145-2

Font layout

The V-I-P uses 43 unique TTS codes to access the 96 photographable characters on the film font. Certain keyboard keys may have three possible meanings (characters that are on the film font) depending upon the precedence key used—

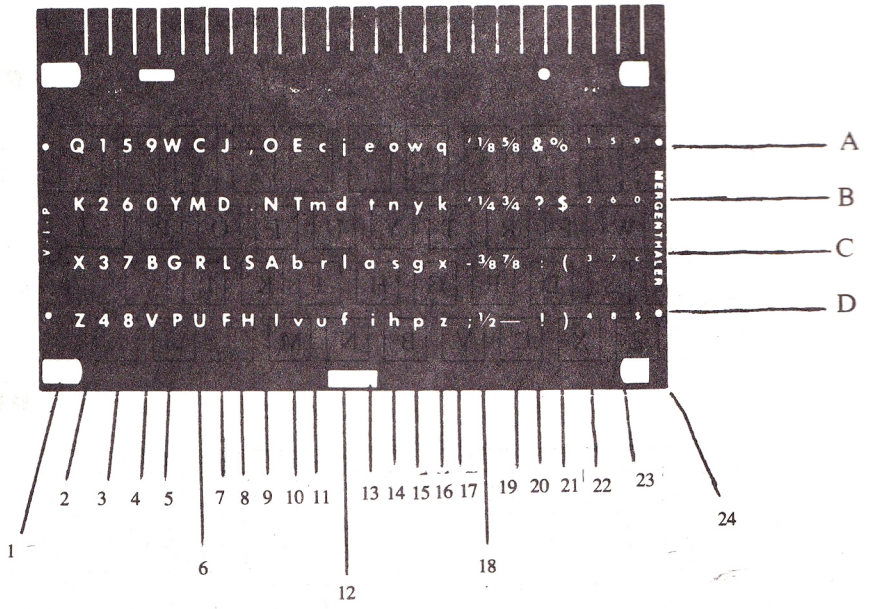
Unshift
Shift
Supershift

Thus the figure 1 key may represent the following characters (in the P-45-1 layout).

Unshift 1	=	1
Shift 1	=	⅛
Supershift 1	=	Superior ^{1}

All characters on the film font have a position that is referenced horizontally by the numers one through twenty-four, and vertically by A through D. Thus the character in position A1 is a TTS code 1-2-3-5 and this code *must* be preceeded by the *shift*.

For any film font character, just check its position and then refer to the chart to verify its input sequence. The keyboard characters refer only to the unshift characters of a typewriter keyboard and, of course, may not represent the characters on your film fonts.



A

	KEYBOARD CHARACTER	UNSHIFT	SHIFT	SUPERSHIFT	TTS CODE
1	Q		·		1-2-3-5
2	1	·			0-1-3-4-5
3	5	·			0-5
4	9	·			0-4-5
5	W		·		1-2-5
6	C		·		2-3-4
7	J		·		1-2-4
8	COMMA	·	·		0-3-4
9	O		·		4-5
10	E		·		1
11	c	·			2-3-4
12	j	·			1-2-4
13	e	·			1
14	o	·			4-5
15	w	·			1-2-5
16	g	·			1-2-3-5
17	OPEN QUOTE	·			0-4
18	1	·			0-1-3-4-5
19	5	·			0-5
20	9	·			0-4-5
21	HYPHEN	·			0-1-4
22	1			·	0-1-3-4-5
23	5			·	0-5
24	9			·	0-4-5

B

	KEYBOARD CHARACTER	UNSHIFT	SHIFT	SUPERSHIFT	TTS CODE
1	K		·		1-2-3-4
2	2	·			0-1-2-5
3	6	·			0-1-3-5
4	O	·			0-2-3-5
5	Y		·		1-3-5
6	M		·		3-4-5
7	D		·		1-4
8	PERIOD	·	·		0-3-4-5
9	N		·		3-4
10	T		·		5
11	m	·			3-4-5
12	d	·			1-4
13	t	·			5
14	n	·			3-4
15	Y	·			1-3-4
16	K	·			1-2-3-4
17	QUOTE	·			0-4
18	2	·			0-1-2-5
19	6	·			0-1-3-5
20	0	·			0-2-3-5
21	$	·			0-1-2
22	2			·	0-1-2-5
23	6			·	0-1-3-5
24	0				0-2-3-5

D

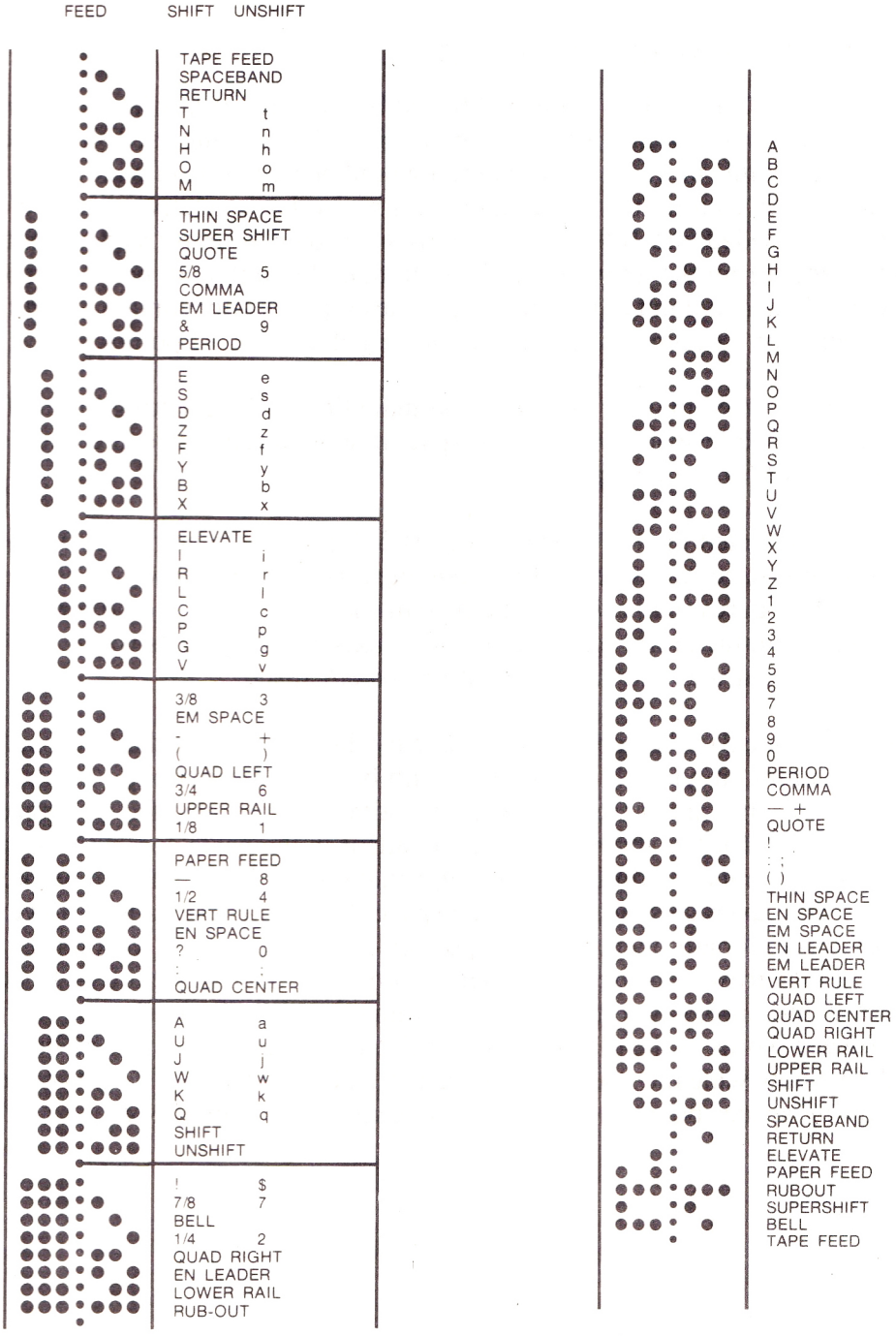
	KEYBOARD CHARACTER	UNSHIFT	SHIFT	SUPERSHIFT	TTS CODE
1	Z		·		1-5
2	4	·			0-2-4
3	8	·			0-2-3
4	V		·		2-3-4-5
5	P		·		2-3-5
6	U		·		1-2-3
7	F		·		1-3-4
8	H		·		3-5
9	L	·			2-5
10	v	·			2-3-4-5
11	u	·			1-2-3
12	f	·			1-3-4
13	i	·			2-3
14	h	·			3-5
15	p	·			2-3-5
16	z	·			1-5
17	SEMICOLON	·			0-2-4-5
18	4	·			0-2-4
19	8	·			0-2-3
20	$	·			0-1-2
21	)	·			0-1-5
22	4			·	0-2-4
23	8			·	0-2-3
24	$			·	0-1-2

C

	KEYBOARD CHARACTER	UNSHIFT	SHIFT	SUPERSHIFT	TTS CODE
1	X		·		1-3-4-5
2	3	·			0-1
3	7	·			0-1-2-3
4	B		·		1-4-5
5	G		·		2-4-5
6	R		·		2-4
7	L		·		2-5
8	S		·		1-3
9	A		·		1-2
10	b	·			1-4-5
11	r	·			2-4
12	L	·			2-5
13	a	·			1-2
14	s	·			1-3
15	g	·			2-4-5
16	x	·			1-3-4-5
17	HYPHEN	·			0-1-4
18	3	·			0-1
19	7	·			0-1-2-3
20	COLON		·		0-1-4-5
21	(	·			0-1-5
22	3			·	0-1
23	7			·	0-1-2-3
24	SEMICOLON			·	0-2-4-5

TTS Coding

The coding structure used to drive the V-I-P is known as TeleTypeSetter coding; and is a modified version of the code used to transmit newspaper stories between major news centers. Before you are misled into believing this is the only tape code system in use; it should be said that there are at least 200 code structures used to transmit, typeset, or otherwise manipulate data. However, the most widely used is currently TTS. This coding has six channels to accommodate data and a central small sprocket hole to permit the driving of the tape through the reader or enable the computer to time the occurrence of various functions. The diagram on this page shows the layout of this tape code.



As you face the tape the channels are numbered from right to left beginning with 0. The "space" is a Code 3; the letter "a" is a Code 1,2; and so on. Do not at this point try to memorize all the codes, but make sure you know the ones in the diagram above. The most important one to the beginner is probably the "space," Code 3; as this enables him to locate where he or she is at when a mistake is made. Finally, in this system there are no special codes for capital letters. The same code is used but is preceded by a *shift* code (1,2,4,5) and succeeded by an *unshift* (1,2,3,4,5). Notice that the unshift is automatically perforated by the keyboard when the shift key is released. The shift lock is merely a key that perforates the shift when struck and does not perforate an unshift when released. This is for setting a complete line in capitals. Symbol for shift ↑; symbol for unshift ↓; shift lock ↑.

STUDY NOTES TO OBJECTIVE ONE

Em space (Code 0,1,3). This code is obtained by striking the key labelled *em space*. The em space is always equal in width to the point size of type being used. In 12 point typesize it would be 12 points in *width*; in 48 point it would be 48 points in width. The point width of an em space is its absolute value; however, it also has a relative value. Within a point size the em is divided into 18ths. These 18ths are known as units (relative units; relative to the point size). From the above it can be seen that although a 48 point em space is four times wider than a 12 point em space both of these spaces only contain 18 units. Therefore one eighteenth of 48 points is larger than one eighteenth of 12 points.

The em space is used mainly for paragraph indention and the setting of tabular matter to give horizontal white space where fixed spacing is required between columns of figures, etc. The symbol for the em space is □.

En space (also called the nut space) (Code 0,2,3,4). Unlike hot metal typesetting, the width of the en space varies depending upon the typeface set. However, it is usually equal in width to the figures (numerals) of the type in use. It can be 8, 9 or 10 units. Its symbol is □. Only the manufacturers' typeface specifications can tell you its width. Ask if in doubt. At one time the en was one half the width of an em space.

Spaceband (Code 3). This code is produced by the spacebar of the keyboard. It is assigned a minimum width; a maximum width before hyphenation; a maximum width before letterspacing; and a fixed or average width used for quadded or ragged settings. Standard settings for the above values are resident in the basic computer program. These are: minimum 3 units; maximum before hyphenation 9 units; maximum before letterspacing 9 units; and, average spaceband (fixed space) 6 units. These values, however, can be altered by the keyboard operator only upon specific instructions, to control quality of appearance in narrow measures. An example would be the typesetting of 10 point type in a very narrow measure, say, 6 picas. One can imagine the enormous spacing that would occur between words as the machine tries to fit two or three words in one line. The above limits define how wide the maximum space can be before the V-I-P starts either hyphenating or putting spaces between the *letters*. The spacebar symbol is #.

Shift lock (Code 1,2,4,5) is a key which generates the shift code only and does *not* produce an unshift when released. It is mainly employed when an entire word or sentence is required to be in upper case (capitals). Striking the shift key again unlocks the shift lock as on the typewriter or keyboard. The shift lock symbol is ↑.

Shift (Code 1,2,4,5) This key places a code in the tape which causes all characters occurring after it to be produced in upper case (capitals). It must be held down like the typewriter equivalent while all following characters are struck. Releasing this key produces an unshift code.

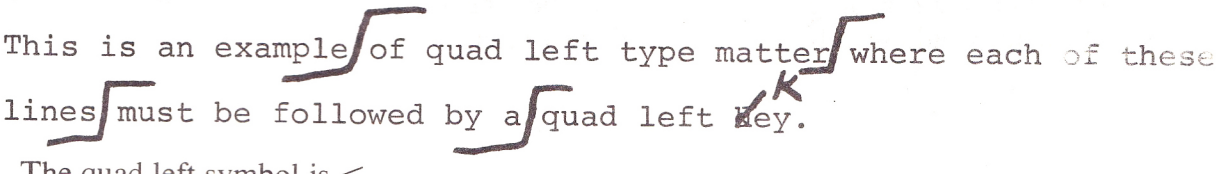
Unshift (Code 1,2,3,4,5) this code causes following characters to be produced in the lower case (small letter) mode. The symbol for shift is ↑; and, the symbol for unshift is ↓.

Supershift (Code 0,2,5) This causes characters to be produced which are both outside the lowercase and upper case alphanumeric set and also not in the sorts character set (''$,'' ''%,'' ''*,'' etc.). On the V-I-P these are superior figures (as found in mathematics or footnotes, e.g. r^2); inferior figures (as found in chemical formulae H_2SO_4); and, ligatures fi, fl, (as used in some typefaces where a separate f and i spoil the appearance of the type—Times Roman being an example; and, also, a diagonal stroke (exactly the same as the one on the font grid shift hyphen position). The use of this diagonal is to enable the setting of compound fractions by superior fig, superior diagonal, and inferior figure, e.g. 2/3 would appear $^2/_3$. The symbol for supershift is ↟. The procedure being used to return to a normal mode, in most plants, is the sequence ↟↑↓. An unshift will also serve to do the same unsupershifting job, but the keyboard in use does not have an unshift key separate from the shift/unshift (when released) key. A superior would be obtained by first accessing the appropriate Roman grid and then ↟2↑↑↓. In general, superior figures are in the Roman grid normal figure keys, when these are preceded by the supershift key. Inferior figures are obtained, again, on normal figure keys after striking the supershift key. fi, and fl etc. are on the same keys in both Roman and Italic grids, again, the supershift key must be struck first. The supershift key may have this symbol on it □, since it is the TTS vertical rule code.

Quad left (Code 0,1,3,4) When this key is struck following a line it causes that line to be set ranged at the left margin, e.g.

This is an example
of quad left type matter
where *each of these lines*
must be followed by a
quad left key.

However, the line breaks must be marked in the copy so that the operator knows where the QL key must be struck, e.g.



The quad left symbol is <.

The QL is used as a paragraph ending code. The V-I-P breaks the lines to form a measure automatically. When setting justified matter, the operator does *not* end any lines. However, the paragraph endings must be indicated by a quad left key which causes the V-I-P to flush the last line of the paragraph left.

Quad right (Code 0,1,2,3,4) QR is placed at the end of lines which are to be placed to the right of the measure and operates similarly to the quad left in all other matters. The symbol for QR is >.

Quad center (Code 0,2,3,4,5) Like the QL and QR this code is placed at the end of lines or words which are required to be centered on the measure. In all other matters it operates like the above codes. The symbol for quad center is ><.

Elevate (Code 2) This code forces justification; that is, causes words within a line to fill the measure by causing spaces to be inserted between words and if necessary letters to fill out the line space. The main use of this code is in correction. Perhaps a line has been set which has one small error in it. The operator may rekeyboard the line and insert an *elevate* code at its end. Provided that the measure has been given ahead of this line along with the correct typeface and leading; the V-I-P will reproduce the line exactly with the correction. The symbol for this code is < >. Do not confuse this with the center symbol above.

Upper Rail (Code 0,1,4,5) NOT TO BE USED IN THIS COURSE. This code is obtained by striking the upper rail key. UR instructs the V-I-P to take characters from the next highest font grid: e.g. if grids 1, 2, and 3 were Times Roman, Times Italic and Times Bold; and the V-I-P was currently being instructed to take characters from the first grid, Times Roman, striking UR key will cause all following characters to be typeset from grid 2 (Italic); striking the UR again would cause following characters to come from grid 3 (Times Bold) and so on. However, the danger is that if type is being set from grid 6 and UR is struck the call is for grid 7 (which may not exist). The result of this error is to cause a machine problem. As beginning keyboard operators are not fully conscious about what they did last they tend to forget how many URs have been struck. This is why we do not use it throughout this book, and will discuss the alternative method for font changes.

Lower Rail (Code 0,1,2,4,5). This key causes characters to be set from the grid lower than the one in use. The exact opposite of the above upper rail code. However, in this case striking lower rail when the machine is typesetting from grid 1 would cause machine trouble. Do not use either of the above UR, LR codes during this course.

Rubout (Code 0,1,2,3,4,5). is obtained by striking the *Code Delete* key. This code perforates all six possible channels and consequently wipes out any of the codes obtainable in the code structure. It is employed in conjunction with the *Tape Reverse* key. Should the operator strike a wrong key, one merely strikes the tape reverse key (which backs up the tape one frame) and overpunches the incorrect character with the code delete key. The V-I-P is programmed to ignore the tape wherever six holes appear. The correct character would then be keyed immediately after the rubout code.

Note: Should one hundred or more rubouts be perforated sequentially, all Bell commands (typesize, typeface, film advance, line length and any special instructions) must be re-entered in the tape as one hundred rubouts is the signal to the V-I-P to reset the computer to home position (the set up in the switches on the console panel).

Tape feed (Code sprocket hole only). The tape feed key provides the operator with a means of feeding out blank tape. However, the sprocket hole serves two purposes: (a) it provides a means of drive wheel traction both at the keyboard and the V-I-P with a mechanical reader; (b) it is used by the V-I-P to sense frames of tape and acts as a timing device.

Thin (Code 0). The thin space is a space equal to the width of the period or comma in the typeface being used (as the en space equals the size of figures). The reasoning behind this is that it may be used in the typesetting of tables where some columns have, say, the number 1,000 and the following column may only have a figure of 500, an en space and a thin space would thus enable alignment of the figures exactly. It is usually 5 or 6 units (18ths). Do not confuse this code with the Add-thin below. The symbol for this space is □. If in doubt as to its width, consult the manufacturer's specifications.

Add-thin (Code 0,4). The add-thin is *not a space*. In the unjustified mode of operation the add-thin acts in an identical manner as the keyboard's *Word Delete*. If an error is made in a word being set, striking the add-thin will cause the V-I-P (not the keyboard) to rubout the word being set and the space preceding it. The space and word must then be re-keyboarded. If, however, one makes an error but puts in the space following the word before stopping, the operator must resort to backing up the tape. Remember, the add-thin (like the word delete) kills not only the word being set but also the last space preceding and anything in between. In the case below the last space preceding is the one before the final word of the last paragraph. Not only does he wipe out the word he wishes to kill but he also rubs out all the machine instructions and the last word of the last paragraph. It is before this word that the last space occurs.

e.g.
the extent of
the kill due to
striking the
add-thin or the
word delete.

. . . a quality product—one which reflects pride in good typography.QL Ƀp14 Ƀf140 Ƀ2 Ƀm060. TYPOGRAPHYQL

Ƀp09 Ƀf100 Ƀ1 Wwhat is interesting is good typography . . .

The add-thin was struck here to kill the word Wwhat, but the last space is in the last paragraph.

Study the above example carefully and make sure you do not make this mistake. The *word delete* would do the same thing.

Objective 1

To complete a multiple choice test on the keyboard layouts with 100% accuracy.

Remove the layout pages from the manual and lay them where you can see them. Try to answer the multiple choice questions below first without looking at the preceding notes. Test yourself on your knowledge and understanding of the foregoing information. When you feel confident of your understanding inform the instructor. The keyboard layouts should always be within your view when typesetting.

QUESTIONS (Circle a letter in the right margin indicating your choice)

(1) The solidus (diagonal stroke /) shares the same key as the (a) ; (b) . (c) 0 (d) hyphen. a b c d

(2) Superior figures are located on (a) supershift postion of Roman font grids, (b) supershift Italic font grids (c) supershift position of Bold font grids (d) none of the above. a b c d

(3) Both Superior and Inferior figures are (a) located by striking the *vertical rule* key and the figure keys in the layout; (b) by striking the normal shift and the figures; (c) by making adjustments at the V-I-P; (d) by striking normal figures in the unshift mode. a b c d

(4) Ligature fi is located on (a) supershift $; (b) supershift ;, (c) supershift 0, (d) the fl key. a b c d

(5) The add-thin and the thin are (a) the same code; (b) thin is a space, add-thin is a command code; (c) the add-thin is a 5 or 6 unit space; (d) none of these a b c d

(6) Ligature fl is located on (a) supershift $; (b) supershift ;, (c) supershift 0, (d) the fl key. a b c d

(7) Inferior figures are located on (a) supershift Italic figures; (b) supershift Roman figures; (c) supershift Bold figures; (d) supershift a to j characters. a b c d

(8) Tape Feed and Paper Feed (a) are the same code; (b) are both for feeding through the punch blank tape; (c) Tape Feed, when held down, feeds tape out into the take up pan; whereas, Paper Feed is to give minus one unit in unshift and plus one unit in shift; (d) Paper Feed causes the V-I-P to feed light sensitive paper into the take up casette. a b c d

(9) Elevate key is used to (a) justify (expand spaces between words so that the line fills the measure); (b) feed the light sensitive paper in the V-I-P to advance one line depth; (c) kill an incorrect word; (d) levitate. a b c d

(10) Shift Lock (a) causes every character set following it to appear in capital letters; (b) produces lower case letters; (c) capitalizes the first letter of the following word only; (d) none of the above. a b c d

(11) To release the shift lock key (a) strike shift lock again; (b) strike the Shift key which gives shift/unshift and by virtue of the unshift code appearing last releases the shift lock; (c) strike vertical rule; (d) strike the supershift key. a b c d

(12) A very important thing to remember when accessing supershift characters is to return to normal mode when the supershift character has been set. This is done by (a) striking vertical rule again; (b) striking either shift or unshift; (c) striking paper feed; (d) the em space. a b c d

(13) Upper Rail is used to (a) cause the V-I-P to produce boldface characters; (b) produce Italic characters; (c) typeset characters from the next highest font grid; (d) produce characters from the next lowest font grid. a b c d

(14) Lower Rail is used to (select an answer from the above). a b c d

(15) Word Delete (a) deletes the entire word being set and the previous space at the V-I-P; (b) deletes the word but not the space; (c) deletes the word being set and the previous space but does this at the keyboard stage; (d) has no function on the V-I-P.

(16) Add-thin in the unjustified mode (a) deletes the entire text preceding it to the last end-of-line code; (b) deletes word being set and previous space at the keyboard; (c) as alternative *b* only at the V-I-P; (d) adds a thin space. a b c d

(17) Add-thin in the justified mode (a) deletes the entire text back to the last end-of-line code including all commands and providing no space occurs in that area; (b) deletes word being set and last space only; (c) adds a thin space; (d) deletes word being set only. a b c d

(18) Code Delete (a) overpunches incorrect characters with the rubout code (5, 4, 3, 2, 1, 0); (b) deletes the entire last word; (c) deletes the entire last line; (d) introduces Bell commands. a b c d

(19) Bell is the first code (a) of all machine instructions; (b) of font change instructions only; (c) of the stop code only; (d) of all command codes. a b c d

(20) Quad Left in the unjustified mode (a) is used to end paragraphs and set ragged right work; (b) is used to end lines; (c) is used to justify lines; (d) is not used. a b c d

Objective 2

To typeset 1,000 words of simple text

Correcting Errors at the Keyboard

Code Delete: if an incorrect character is struck while typing a word; it is merely necessary to strike the REVERSE TAPE FEED key once and then the CODE DELETE key. This procedure backs up the tape one frame and overpunches the incorrect code with a rubout (5, 4, 3, 2, 1, 0) all *six channels*. The correct character is then struck immediately after.

Automatic Word Delete (if available): If the operator makes an error and is uncertain of precisely which code is incorrect, he may strike the WORD DELETE key which automatically reverses the tape (at the keyboard) to the last spaceband then automatically advances inserting rubouts through the last spaceband and the word presently being set. The operator must now insert a *spaceband* and set the word again.

Add-thin: The Add-thin key will cause the V-I-P to rubout the previous space set and the word currently being set. It operates exactly the same as the WORD DELETE command only *inside* the V-I-P; *nothing happens at the keyboard*. The operator again must type the last *spaceband* and reset the incorrect word.

Killing a single code: Occasionally an operator may wish to kill an individual code at a point in the tape previous to his present location in the job. The code to be deleted is positioned so that it is *intersected* by the plastic head in front of the punch. Reverse the tape feed two frames. The code to be killed is now directly over the punch and may be removed by striking CODE DELETE.

Caution: Sequential rubouts of 100 codes or more will reset the V-I-P; therefore, it is wise, if a large number of rubouts have been *sequentially* perforated, to re-enter all parameters.

It is a very bad habit to typeset so carelessly as to require a lot of killing. A clean operator is both faster and more accurate.

Illustrations

Code Delete: It is connsidered . . .

Word Delete and Add-thin: It is xconsid considered . . .

Typeset the accompanying article "Technological Change and Typesetting". This is to be an 'unjustified' setting which means that you merely type words and spaces continuously until you reach the end of a paragraph. At the end of a paragraph you strike the QL code and immediately following it an EM SPACE. The QL causes the last line of the paragraph to be flush left; the em space indents the first line of the next paragraph one em space. The job is ended with a QL, then tape feed a couple of inches of tape and Key *Bell* and character *s*.

Remember:
Supershift Unshift $ — gives fi
Supershift Unshift ; — gives fl
QL em space ends all paragraphs in this assignment

Add-thin or Word Delete erases the word you are currently setting and the previous space. The space is re-entered and the word re-set. (Do not confuse Add-thin with Thin).

New Codes required
Bell s = Stop. When the V-I-P reads this code it stops.
Bell hyphen = Discretionary hyphen. This code requires some experience to use wisely. The idea is to place the instruction *Bell* hyphen at a point in a long word where you would prefer a hyphen to appear *if* one is required. It overrides any hyphenation decision the V-I-P may wish to make automatically.

Diagram of setting procedure

To end a paragraph: . . . hand set print. Production was low and illiteracy widespread. QL EM

To end the job . . . to make this possible.QL, tape feed, Bell s, tape feed.

THE INSTRUCTOR WILL DEMONSTRATE MANUAL PARAMETER SETTINGS ON THE V-I-P

The turn of the century saw sudden upheaval in the typesetting industry much the same as that being experienced today. Mechanical composition machines had recently been invented and threatened to create unemployment among printers. However, although some unemployment did ensue, an amazing thing happened. Instead of continuous loss of jobs more and more positions were created. The new devices were increasing rather than diminishing work. Books and other forms of printed matter were becoming cheaper to produce owing to increased efficiency. Tremendous strides in publication and readership occurred. In the years following 1900 the amount of printed material grew more than it had in the previous three and one half centuries. Mechanical composition made available books at a price the average man could afford. Prior to that time only the well-to-do could afford to purchase books made from hand set print. Production was low and illiteracy widespread.

10/13 x25 Times Roman just.

Relatively sudden technological change has struck the industry agiain. The same despondency and insecurity has invaded the coposing room as that prevalent in the late nineteenth- and early twentieth-centuries. One is forced to ask, "Are there any grounds to support the negative views of many of the industry's employees?"

no extra space

Employers, when questioned, complain that the

difficulty is not shortage of jobs due to new technology, but finding skilled people to fill positions using both new and old skills. Unions echo this opinion saying, "there are not less but rather more jobs available today than there were in the period before phototypesetting took hold."

In view of the above positive attitudes exhibited by leading employers and unions; why is there such negativism among workers? It appears to be the result of a widespread belief at the beginning of this era that because photocomposition used a typewriter-like device typesetting was really merely typing. However, among the more informed people in the industry this idea no longer holds. It has become recognized that typesetting is, after all, considerably more complex than typewriting. Unfortunately, because of the oversimplifying publicity put out by some manufacturers and others, a widespread shortage of skilled help is developing. Many potential keyboard operators, and other necessary personnel, among apprentices and tradesmen are abandoning any thought of retraining. Not only this, but well-read and intelligent high school students are also tending to avoid entering a field they believe is over-automated. It is now up to manufacturers, employers, and unions to reverse this trend by informing laymen and printer alike that there is meaningful work inherent in this industry. If this is not done a chronic shortage of skilled help is likely to develop.

However, apprentices should bear in mind that there is sometimes an element of truth in a rumour. The computer has successfully invaded the newspaper, book, and catalogue production industries. The skills in these areas take on a different form. Monotonour repetitive tasks have been, to some extent, replaced by computer; but, the planning skills have correspondingly increased in importance. A person employed in these fields should perhaps emphasize in his studies cold type mark-up programming and other similar areas. On the other hand, work involving complexity, small word quantity, and variety of format is uneconomical using some of the new techniques. Because of this, considerable keyboard skill is still necessary. In some types of work it is even expedient to use hot metal keyboard techniques. This latter is proven by the fact that some houses in the city are actively seeking Monotype Keyboard operators and photo-composition counting keyboard operators; fields that, if the general beliefs were true, would be shrinking rapidly.

There will continue to be a demand for such arts as Ludlow operator, Linotype operator, Monotype keyboard operator, and hot metal compositor in some plants. Admittedly these positions are getting less year by year; but, it is probable that at a future point a levelling off will occur; the industry may even find itself a bit short of people to fill them. Already George Brown College reports it has been receiving

a growing number of calls from employers requesting hot metal skilled people.

From the above it should be obvious that the change from the old techniques to the new will not be one of cataclysmic proportions. Employers are well aware that equal, if not greater skills, are required in all of the new techniques. In addition it should be said that the avowed policies of most leading typesetting shops is to take existing personnel and give them ample opportunity to adapt or retrain. Conversely, however, it is equally true that skills such as computer service technician, and film assembler are going to non-printer personnel. One might ask again, why? Are employers seeking outside help from sheer perverseness? It would seem not. Almost all employers would prefer printers; printers who had taken the time and trouble to acquire such skills as electronics knowledge, programming, film assembly, negative stripping, or perforator operation, rather than non-printers who would unavoidably be a source of misunderstanding and confusion as they grappled with unfamiliar terms and conventions. A recent advertisement appearing in a Toronto newspaper verifies the above; they required "A typesetter with a knowledge of printer's measurements and terms". In other words the need was for a typographer with typewritting skill; for a typesetter can more easily acquire keyboard techniques than a typist can acquire a printer's knowledge and experience. If a printer is seventy-five per cent qualified for

the latest processes surely he has a better chance of obtaining the remaining twenty-five per cent than he has of learning one hundred per cent new knowledge of a completely unrelated field.

According to latter day philosophers, change is becoming a way of life. Indeed, change has invaded all aspects of print; but what kind of change? One set of tools has been replaced by another. Increased leisure has occurred in the form of a shorter working day; but, overtime is frequently essential to meet production needs. In the past, new innovation in communications has caused vast upsurges in production; and, undoubtedly this is occuring again. Many items, which were impossible to produce due to deadlines or perhaps there relative unimportance, will now become printable. All facets of the Graphic Arts Industry will witness phenomenal growth and printers can only benefit.

The future of any worker in any trade connected with the Graphic Arts will be directly related to his willingness to update his skills to meet this challenge; and both the employer and the employee have a responsibility to each other to make this possible.

Result:

The turn of the century saw sudden upheaval in the typesetting industry much the same as that being experienced today. Mechanical composition machines had recently been invented and threatened to create unemployment among printers. However, although some unemployment did ensue, an amazing thing happened. Instead of continuous loss of jobs more and more positions were created. The new devices were increasing rather than diminishing work. Books and other forms of printed matter were becoming cheaper to produce owing to increased efficiency. Tremendous strides in publication and readership occurred. In the years following 1900 the amount of printed material grew more than it had in the previous three and one half centuries. Mechanical composition made available books at a price the average man could afford. Prior to that time only the well-to-do could afford to purchase books produced by hand-set type. Book production was low and illiteracy widespread.

Relatively sudden technological change has struck the industry again. The same despondency and insecurity has invaded the composing room as that prevalent in the late nineteenth- and early twentieth-centuries. One is forced to ask, ''Are there any grounds to support the negative views of many of the industry's employees?''

Employers, when questioned, complain that the difficulty is not shortage of jobs due to new technology, but finding skilled people to fill positions using both new and old skills. Unions echo this opinion saying, ''There are not less but rather more jobs available today than there were in the period before phototypesetting took hold.''

In view of the above positive attitudes exhibited by leading employers and unions; why is there such negativism among workers? It appears to be the result of a widespread belief at the beginning of this era that because photocomposition used a typewriter-like device, typesetting was really merely typing. However, among the more informed people in the industry this idea no longer holds. It has become recognized that typesetting is, after all, considerably more complex than typewriting. Unfortunately, because of the oversimplifying publicity put out by some manufacturers and others, a widespread shortage of skilled help is developing. Many potential keyboard operators, and other necessary personnel, among apprentices and tradesmen are abandoning any thought of retraining. Not only this, but well-read and intelligent high school students are also tending to avoid entering a field they believe is over-automated. It is now up to manufacturers, employers, and unions to reverse this trend by informing laymen and printer alike that there is meaningful work inherent in this industry. If this is not done a chronic shortage of skilled help is likely to develop.

However, beginners should bear in mind that there is sometimes an element of truth in a rumour. The computer has successfully invaded the newspaper, book, and catalogue production industries. The skills in these areas have taken on a different form. Monotonous repetitive tasks have been replaced by computer; but, the planning skills have correspondingly increased in importance. A person employed in these fields should perhaps emphasize in his studies cold type mark-up, programming and other similar areas. On the other hand, work involving complexity, small word quantity, and variety of format is uneconomical using some of the new techniques. Because of this, considerable keyboard skill is still necessary.

Objective 3

Tape control of the V-I-P

There are four basic instructions required by the V-I-P to output type: Point Size; Film advance, Typeface, and Line length.

Point size: The point size is selected by keying **Bp** and *two digits*. The sizes available depend on the type of font grid in use, A range or B range. Throughout the manual we use only A range. The following sizes are available (make a note of them).

A range sizes: 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 27, 30, 36
B range sizes: 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 48, 54, 60, 72
Base aligning sizes: All sizes from 6 to 72

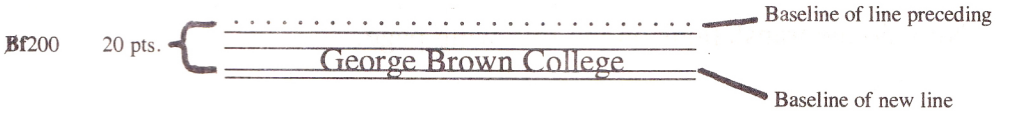
An example of a point size instruction would be **Bp**07 which causes the V-I-P-'s zoom lens to move to the position giving the 7 point typesize. Note that a zero (Ø) must be placed in front of the 7 to satisfy the machine's requirement of *two digits* in all point sizes. Never key **Bp**9 as this is calling for 90pt+ type which is not mechanically possible and can damage the V-I-P. B range grids are double the size of the A range grids, consequently the machine can only carry three at a time on one drum instead of six A range grids. Whereas the character masters of the A range are 12 points in size the masters of the B range characters are 18 points in size. The zoom lens system magnifies or reduces these base sizes to fulfill the point size needs as called for. The B range set up doubles the sizes obtainable in A range, e.g. instead of 6 point we have 12 point; instead of 24 point we get 48 point. However, during this first course we do not use B range.

Film Advance: A film advance setting gives spacing between lines or *leading*. It is achieved by keyboarding **Bf** and *three digits;* the first two digits represent points and the third represents one half points. A special note about this third digit. It can only be a 1 or a Ø. The one means one half point; the zero means no half point. Should one keybard in, say, a 2 into the third digit spot this would mean 2 half points which is really one whole point. It makes no sense to put more than 1 in the third spot. A film advance of 10½ points would be keyed in this manner

Bf101

Once entered the film advance setting remains the same until either the operator changes it, again, by keying a new **Bf** instruction; or, the machine stops which automatically wipes out all tape instructions and reverts to the manual console settings.

On the V-I-P it is important to recognize that the film advances *before* the line of type is exposed. It is extremely important when doing mark-up to understand what this means.



In the above diagram the film has advanced from the location of the baseline of line preceding to the new baseline below. The words George Brown College are then photographed. The typeline is 10pt whereas the film advance is 20pt. Because the film advances before the line is exposed the extra 10pts of white space occurs above the type line not below it.

A new line advance occurs each time a line ending signal is recognized. This can be either on tape (QL, QR, QC, Elevate); or, internally, for instance when the V-I-P is automatically justifying raw tape. The maximum line advance possible is 99½ points.

Type face selection: The V-I-P holds six or eighteen font grids at one time. Therefore a maximum of 18 typefaces can be employed at any given time. The machine instruction for selecting one of the grids is a **Ƀ** followed by the font drum letter and a grid number, a single digit. Throughout this course we use a standard set-up which gives Roman, Italic and Bold in a serif typeface and a sans-serif typeface on one drum. Write the following list down for future reference:

Ƀ1 Times Roman
Ƀ2 Times Italic
Ƀ3 Times Bold
Ƀ4 Helvetica Roman
Ƀ5 Helvetica Italic
Ƀ6 Helvetica Bold

The A, B, or C drums are accessed as such:**ƂA** 1-6, **ƂB** 1-6, **ƂC** 1-6.

Line Length: The maximum line length obtainable on most models of V-I-P is 45 picas. The line length instruction requires a **Ƀl** (**Ƀ** letter l) and *four digits*. The first two digits are picas; the second set of two digits are points (no half points are possible), e.g.

24½ picas (**Ƀl**2406) 24 picas and six points

A measure of 10 picas and 3 points would appear as

(**Ƀl**1003)

A complete format set-up

It can be seen from the above information that the following formats (as they are known) can be translated into keystrokes quite easily:

6/7½ Times Roman
< 20 picas

becomes **Ƀp**06 **Ƀf**071 **Ƀ1** **Ƀl**2000

10/13 Helv Italic
< 11½ picas

becomes **Ƀp**10 **Ƀf**130 **Ƀ5** **Ƀl**1105

A shorthand way of writing formats:

06	071
1	2000

10	130
2	1106

Now do the translations on the following page.

Note, when keying in Ƀ instructions for this manual at least one inch of TAPE FEED should be placed between each instruction, e.g. Ƀp08 . . . . . Ƀf080 . . . etc

Objective 3

Translate the following formats into V-I-P machine instructions

(a) 6/8 Times Roman 21 picas _____

(b) 7/10 Helvetica Roman 45 picas _____

(c) 9/10½ Times Bold 14½ picas _____

(d) 24/22½ Helvetica Italic 35 picas, 3 pts. _____

(e) 18/20 Times Italic 11 picas, 10 pts. _____

(f) 20/21½ Helvetica Bold 24½ picas _____

Translate the following V-I-P parameters into hot metal mark-up, our set-up

(g) Ƀp10 Ƀf111 Ƀ1 Ƀl1506 _____

(h) Ƀp09 Ƀf100 Ƀ3 Ƀl1103 _____

(i) Ƀp14 Ƀf161 Ƀ5 Ƀl2400 _____

(j) Ƀp07 Ƀf060 Ƀ2 Ƀl1502 _____

(k) Ƀp24 Ƀf301 Ƀ4 Ƀl4409 _____

(l) Ƀp18 Ƀf200 Ƀ6 Ƀl1111 _____

Translate formats (a) to (1) into abbreviated mark-ups flush left

(e.g. (a) 6/8 Times Roman 21 picas)

06	080
1	2100

(a)

(b)

(c)

(d)

(e)

(f)

(g)

(h)

(i)

(j)

(k)

(l)

NOTE:

The keys struck to enter a machine instruction may be in either shift or unshift. However, *NEVER shift or rubout within a* Ƀ *command* with the exception of Ƀd (explained later on). Avoid setting Ƀ instructions in shift if the tape is to be fed through the CorRecTerm.

Objective 4

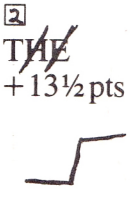
The first tape instructed job

This objective is the beginning of typesetting proper. The first assignment was merely a warm-up. From now on the amount of keyboarding is much less but the instructing from tape grows greater. However, there is nothing difficult about this and attention to the detail of coding and the development of accurate typing will enable you to gain a great deal of satisfaction from the course.

From now on each typesetting objective must be preceded by *your name, the date, and the objective number* all in *10/12 grid one, 45 picas, one line flush left.* This is known as a "catch line" and, in a plant is a valuable means of keeping track of who typeset what and when. Normally it would contain not only the initials of the keyboard operator but such detail as the typeface and measure. However, throughout this course we will follow the pattern described above. Memorize this sequence and *do it at the top of each objective.* Follow it with QL QL to give on extra line space.

Ending lines of known length

The purpose of this objective is to show you how to typeset matter where the line endings are pre-determined and done manually by the operator. Study the diagram below carefully. First notice that one of the four possible line ending commands (QL, QR, QC, ELEVATE) is required at the end of each line; secondly, the format which determines how the line will look occurs *before* the line is set; thirdly, note that when the measure is entered in the first format of a job it need not be repeated in subsequent formats as long as it remains the same. Finally, do not forget to typeset your catch-line before starting.

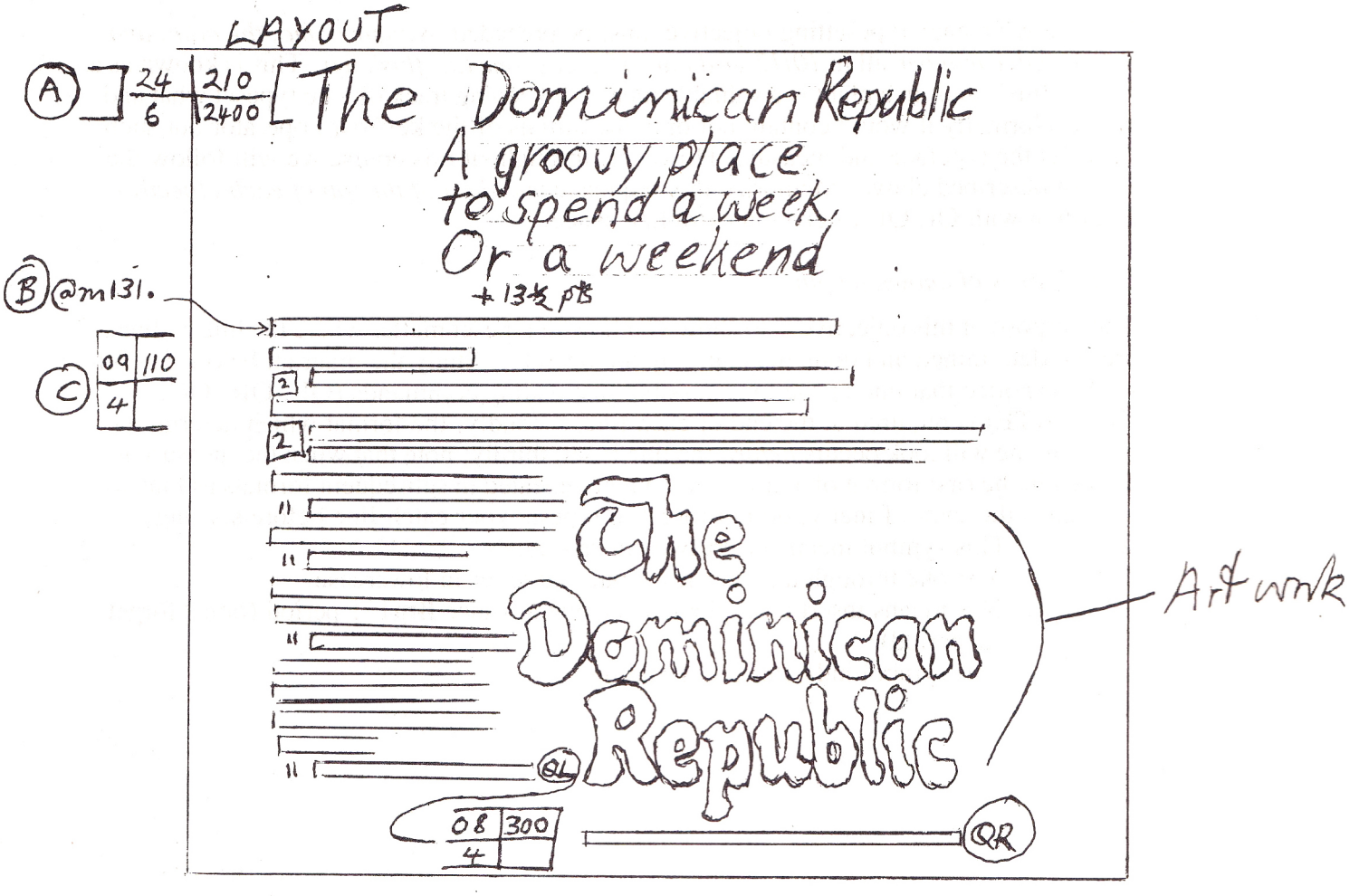


This symbol means insert two em spaces.

A stroke through a letter means put that letter in lowercase.

+13½pts This means insert a supplementary line advance **Bm**131 period (don't forget the period)

This symbol indicates a line ending.


LAYOUT
A
24
6
210
2400
The Dominican Republic
A groovy place
to spend a week,
Or a weekend
+13½ pts
B @m131.
C
09
110
4
2
2
The Dominican Republic
Artwork
QL
08
300
4
QR

THE DOMINICAN REPUBLIC
A GROOVY PLACE TO SPEND A WEEK. OR A WEEKEND. ac B

+13½ pts

C

Grand casinos just a chip shot from green golf courses. And see-thru waters. Luxury hotels that tower over 17th Century cathedrals. And jungle mountains that tower over luxury hotels. Banana trees. Palm trees. Coffee trees. And a sweet ocean breeze. Scuba diving. And big game fishing. Polo. Horseback riding. Tennis and a tropical zoo. Dishes like sancocho. Or pastelitos. Or filet Mignon. Spanish guitars. And Swiss watches. And French perfume. And beaches where you can get sand in your shoes. Without someone stepping on your toes. See your travel agent.

S/

A Great Place To Get Away From The Crowd.

Result:

The Dominican Republic. A groovy place to spend a week. Or a weekend.

Grand casinos just a chip shot from green golf courses.
And see-thru waters.
Luxury hotels that tower over 17th Century cathedrals.
And jungle mountains that tower over luxury hotels.
Banana trees. Palm trees. Coffee trees. And a sweet ocean breeze.
Scuba diving. And big game fishing. Polo. Horseback riding.
Tennis and a tropical zoo.
Dishes like sancocho. Or
pastelitos. Or filet Mignon.
Spanish guitars.
And Swiss watches.
And French perfume.
And beaches where
you can get sand in
your shoes. Without
someone stepping on your toes.
See your travel agent.

A Great Place To Get Away From The Crowd.

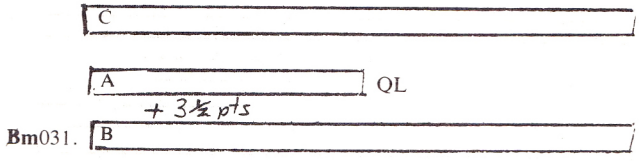
Objective 5

Supplementary spacing and typeface changes

Typesetting frequently requires the setting of blank space between lines or paragraphs. If a mere line of white space is needed, an extra QL, QR, QC, or Elevate code will create such a space by advancing the light sensitive paper an amount equal to the **Bf** in use at that time. However, in this objective the above method is too rigid as a number of advances different from the **Bf** setting are required.

Supplementary line advance

This instruction is brought into operation by the following sequence **Bm** three digits *and* either a *period* or a comma. When followed by a period the three digit value is *subtracted* from the **Bf** setting in use at that time. For now the only one that concerns us is the (**Bm**000.). The first two digits represent points and the third represents either 0 half points or one half point. Notice in the diagram below that the **Bm**instruction is placed immediately before the start of line B and following the QL of line A. Why? If you recall, extra space in a line advance appears above the line to which it is added. Therefore to get the extra 3½ points between the paragraphs above, the **Bm**031. must go at the beginning of the line labelled B so that it will be added to the line advance of that line. If, in error, the **Bm**031. was placed before the QL signal the extra space would occur between the lines C and A. *Do not forget the period.* The **Bm** instruction *cancels itself* at the end of the line in which it occurs.



Typeface changing within lines

This procedure can best be demonstrated with an example:

B3 **Art Director B**1 THOMAS S. HUESTIS QL
B3 **Managing Editor B**1 CYNTHIA KELLOGG QL

Note that the typeface change signal **B**3 (or **B**a3) or **B**1 is placed immediately before the words to which it applies. The following copy has been typed to be as close as possible to what the job will look like. However, a couple of deliberate errors have been made to enable you to recognize common mark-up signs. These are

Set in capital letters
Set in boldface
Set in lowercase
Period
Set in italic
Delete
-- Means one em dash *not* two hyphens. (↑figure 8↓)
Close up, no space
Run-on (include in same line).
Start new paragraph

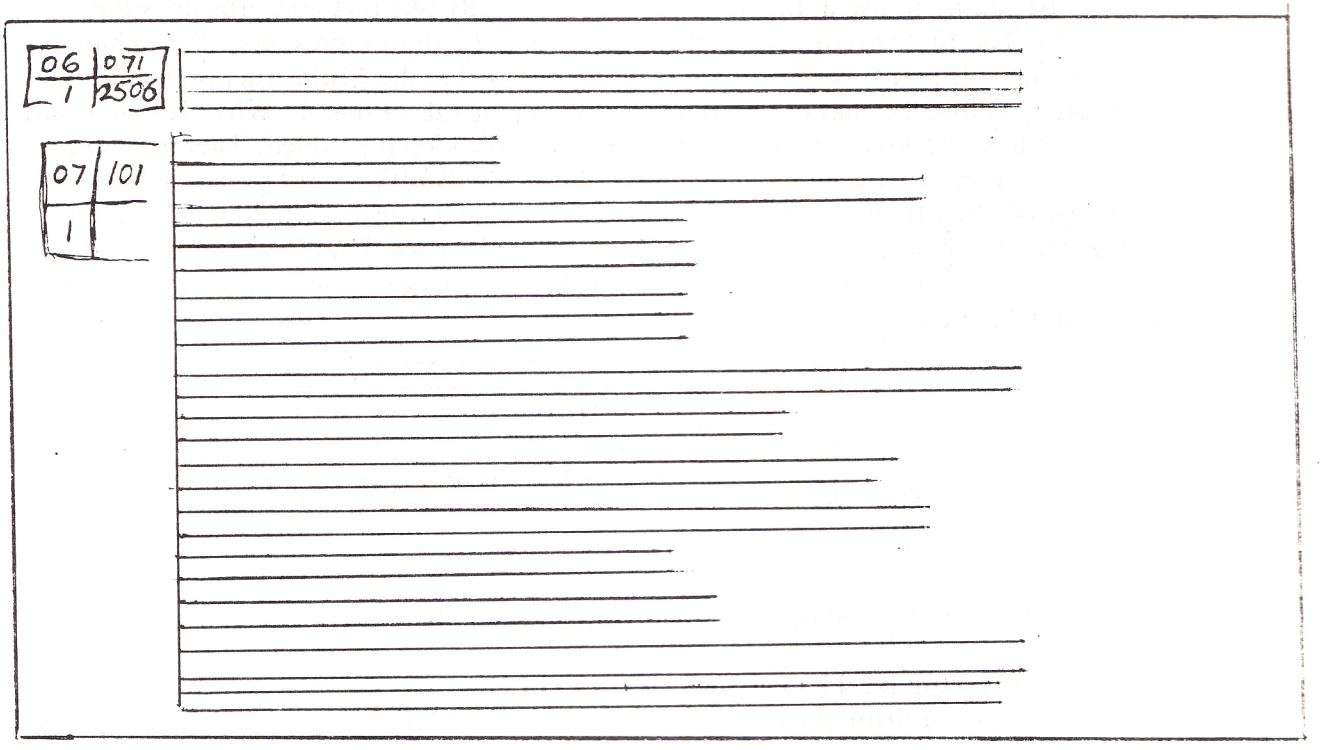
Finally, one em (mutton) *dash* occurs in this copy between the words "VENTURE — The Traveler's World." This is obtained as follows

↑ figure 8 ↓

Do not under any circumstances use the hyphen, which is adjacent to the letter p, in place of a mutton dash (18 unit dash).

Objective 5

To follow a layout



PHOTOGRAPHERS AND artists. COVER: Xograph photograph by Visual Panographics, Inc. ENDPAPER: Frank Stevens II INSIDE PAGES: chas. b. slackman, 9; Tibor Hirsch, 17; James Barkley, 65 and 87 through 91; Rafael Palacios, 90 (map); Margaret Coro, 92.

COWLES COMMUNICATIONS

GARDNER COWLES Editorial Chairman William ATTWOOD

Editor in Chief

VENTURE—The Traveler's World

Editor CURTISS ANDERSON

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MAYA YATES Service

Assistant Art Director WILLIAM S. LEFT

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Picture Editor NANCY KELLY

Art Associate JOHN BROGNA

Result:

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Objective 6

REVIEW

Complete the following test without looking at the answers given below. Mark the test yourself and if satisfied do the assignment following.

TEST

(1) # means _____
(2) ⅄ means _____
(3) ∿ means _____
(4) ⊙ means _____
(5) @ means _____
(6) ℓ means _____
(7) ⌒ means _____
(8) +4 means _____
(9) ⌐ means _____
(10) ≡ means _____
(11) **Bm**121. = _____
(12) **Bm**031. = _____
(13) **Bm**001. = _____
(14) **Bm**100, = _____
(15) means _____

10	120
1	1506

Objective 7

Kerning by machine instruction

This assignment contains only one machine instruction that you have not encountered before. The Ƀ comma (Ƀ,) instruction for kerning. Kerning is the reduction of space between *letters*. The way that Ƀ, does this is to reduce the width of the character or its escapement. Two digits must follow the Ƀ, and these represent 9ths of one point. Therefore Ƀ,09 would instruct the V-I-P to reduce following characters' widths by one point each. The machine will continue to do this until it reads Ƀ,00 which cancels this instruction. Throughout this course the full instruction will be written before lines or words to which it applies. However, *you* must remember to cancel the instruction unless for some reason we include it. It is only meant to apply to the *line before which it is written.*

e.g. Ƀ,04 GEORGE BROWN COLLEGE (place the cancelation here) Ƀ,00 of Applied Arts and Technology

When typesetting check both the layout and the copy for machine instructions as sometimes instructions may be placed on one but not the other.

This assignment constitutes a complete review of the main objectives up to this point. Remember you, *not the V-I-P,* are making the line breaks.

When the kerning instruction Ƀ, is placed near to a mark-up, this means that it applies to all type in that face and size.

Note: Do not forget to cancel the kerning instruction *immediately* on completing data to be kerned.

LAYOUT ONLY

see copy for kerning

heading only.

Seal up the holes in your security system. Call in the professionals.

the professionals

SEAL UP THE HOLES IN YOUR SECURITY SYSTEM.

CALL IN THE PROFESSIONALS

Why let hard-earned profits slip away through gaps in your security? Plug those gaps with a custom-tailored program from Secur Co. the professionals.

As the oldest and largest security agency, we have a full spectrum of security specialists who've dealt with every problem in the book.

People with the know-how and experience to tailor the most effective protection for your security dollar, whatever your special problems.

Guards, male and female. Inspections at specified after-hour intervals. Thoroughly trained personnel backed by the best supervisory ratio in the industry.

The broadest selection of cost-cutting security equipment available. From sophisticated closed-circuit TV systems to the latest sensory devices.

Confidential investigations to end your internal dollar drains. Pilferage. Lax supervision. Sabotage. Drinking or drug abuse.

More than a dozen offices across Canada to assure multi-facility firms a consistently high level of security.

Many Canadian companies specify Secur Co. professional protection. Find out how we can plug your profit drains, probably at a lot lower cost than your present security force.

Result:

Seal up the holes in your security system Call in the professionals

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Objective 11

Film Advancing Within a line

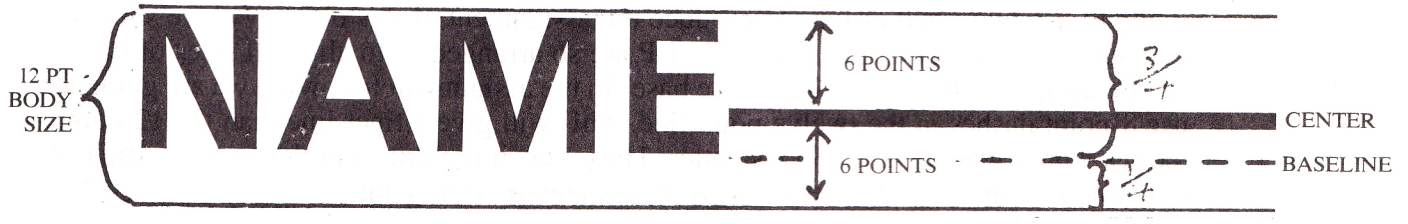
Some V-I-P's do not have font strips containing base aligning rules; however, this lack is a useful device for demonstrating the use of **Bif**. This machine instruction is followed by three digits (but *no* period). Again, the first two digits represent full points, e.g. **Bif**070 would be a film advance of 7 points occurring immediately at the point the **Bif** occurs; the third digit means one half point and can only be a one or a zero digit, e.g. **Bif**071 represents an immediate film advance of 7½ points. The proper name for this instruction is *Immediate Film Advance*. Therefore, if it is needed in more than one line it must be entered at the appropriate point in each and every line.

One use of Bif

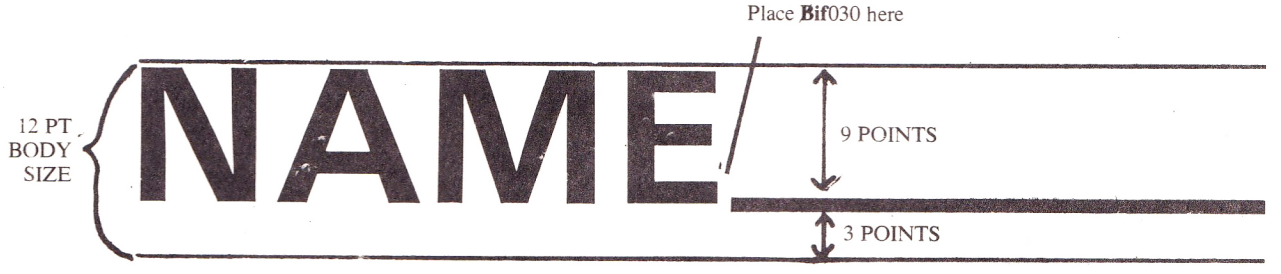
The em dash is located in the center of the type size (see diagram A below); or, ¼ of the point size above the baseline of the character. To align this center aligned em dash with the baseline of the typeface, the **Bif** must be ¼ of the point size. Observe diagram B: immediately after setting the **Bif**030 (¼ of 12 pt) the em dashes are dropped by this amount to the baseline of the word NAME.

An important additional fact is that **Bif** may only be used *once* in a line.

DIAG. A



DIAG. B



Questions

Figure out the necessary **Bif** values to drop the dash to the baseline of the following typesizes. If it is not possible, write "not possible."

e.g. (1) 12 point: **Bif** _____

(2) 13 point: **Bif** _____

(3) 14 point: **Bif** _____

(4) 16 point: **Bif** _____

(5) 8 point: **Bif** _____

(6) 9 point: **Bif** _____

(7) 10 point: **Bif** _____

(8) 11 point: **Bif** _____

(9) 18 point: **Bif** _____

(10) 24 point: **Bif** _____

Of course the above *not possibles* are possible if the customer is willing to have a base aligned rule that is ¼ point out.

Base Alignment

Base alignment is a concept we have mentioned several times thus far; and, as we are going to use two sized of type to produce the assignment of this objectivve we should explain what it is. The optics of the V-I-P are so arranged as to align all sizes of type (while using A-range font grids) at the base. In the assignment following we are going to use 8-point dashes in the twelve point line. This will give a finer line than the 12 point dashes would which simply looks better. However, it presents a problem; the setting of only one line of the assignment would necessitate the following.

NAME **Bp**08 **Bif**030 **Bd** shift 8 unshift **Bp**12 QL

16 separate keystrokes are required to complete the dash line in 8 point typesize using the **Bd** and **Bif**. If the job was of any great size, or even, one page the above sequence of codes is a tedious and error prone procedure.

Storing information in the V-I-P's memory
Depending on the size of the V-I-P's memory it can be used to hold long strings of instructions, as the example above, which can then be recalled at will with shorter instructions.Some V-I-P's have a 12K memory and can thus store about 64 separate strings of instructions or text providing they do not individually exceed 37 codes. The only danger here is that an error in procedure of storing information can blow the V-I-P's mind and incur expensive delays while the main memory is re-fed.

Method of Storing and Recalling
The basic storage blocks in the V-I-P's memory are numbered 1 through 67. To address a block in which to place information you keyboard **Bqs** followed by a number not greater than 67.
e.g. **Bqs**62 (means store the following in memory 62) However, this **Bqs** instruction is not the only coding required one must also put in an end of store instruction. This end store is **Bqe Bs**. The complete store sequence is therefore:

Bqs62THE INFORMATION TO BE STORED **Bqe Bs** *6 inches of tape feed*

The above sequence of codes would normally be perforated on a tape separate from the job tape and fed into the V-I-P prior to running the job. Note the 6 inches of tape feed required after the **Bqe Bs** this is to ensure the information is secured in the memory. When memory tapes such as the above are run in the tape continues well past the **Bqe Bs** and stops. If the **Bqs** strings are too close together the tape stops in the middle of the following **Bqs** and when the machine is restarted to read the next memory into the storage of the V-I-P half of it is missing; as this is the first half with the **Bqs** on it this memory is lost. Leave lots of space between **Bqs**'s.

Recalling the stored information
To recall the stored information a further instruction is required at the point in the job tape where the stored information is needed. This is Bqu and the appropriate storage block number. In the case of the example above it would be **Bqu**62 which would recall from the V-I-P's memory THE INFORMATION TO BE STORED. Finally remember that between **Bqs**62 and **Bqe Bs** there must not be more than 37 keystrokes. Make up a memory storage tape as follows and then typeset the assignment for this Objective 11.

Storage tape: **Bqs** (xx) **Bp**08 **Bif**030 **Bd** shift 8 unshift QL **Bp**12 **Bqe Bs**

Recall in job: **Bqu** (xx)

a/

The George Brown College Health Centre

+14

NAME _____

CAMPUS _____

SECTION _____

SUPERVISOR _____

HOME ADDRESS _____

TELEPHONE _____

ALERGIES _____

HANDICAPS _____

BLOOD TYPE INFORMATION _____

DATE _____

RELIGION _____

Result:

The George Brown College
Health Centre

NAME _____

CAMPUS _____

SECTION _____

SUPERVISOR _____

HOME ADDRESS _____

TELEPHONE _____

ALLERGIES _____

HANDICAPS _____

BLOOD TYPE INFORMATION _____

DATE _____

RELIGION _____

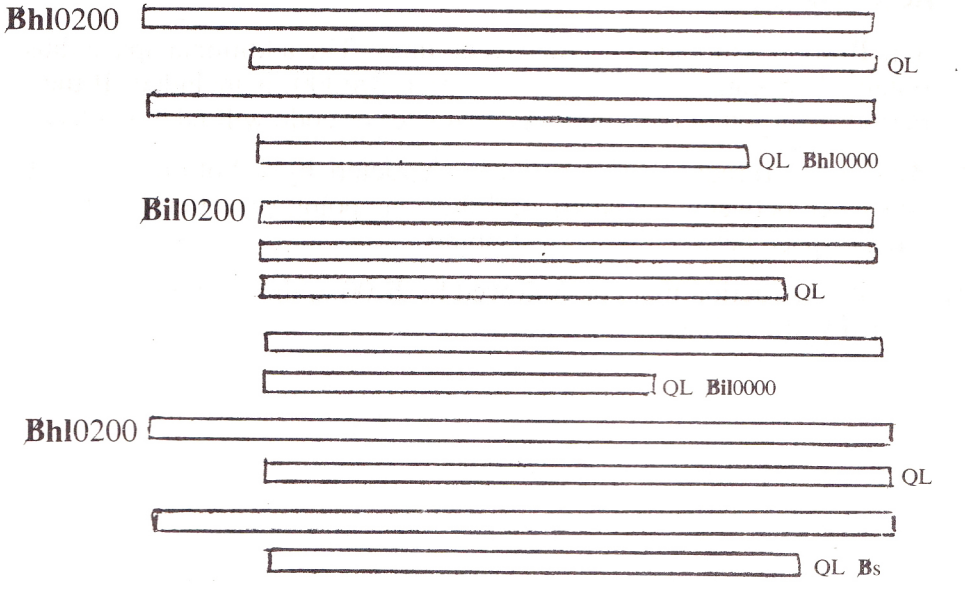
Objective 12

Basic Automatic Hanging Indent left side

A *hanging* indent is where the first line of a paragraph is the full measure of the job and subsequent lines are indented, e.g.:

The previous automatic indent was merely a straight indent without any hanging part on the first line:

To produce the hanging indent effect, the instruction **Bhl** followed by four digits will cause the *paragraphs* following to be hanging indented the number of picas and points indicated by the required four digits. Each paragraph is ended with a **QL** as in justified setting or **Bil** setting and the V-I-P automatically resets the hanging indent instruction for the next paragraph. If one of the paragraphs is a sub-paragraph the **Bhl** *must be cancelled by* **Bhl**0000 and the **Bil** and the correct value entered. Likewise to return to **Bhl**; **Bil**0000 must be entered and **Bhl** and the correct value re-entered. However, with your new knowledge about memory storage sensible pre-planning and storage can eliminate most of the work.



In the above diagram notice that **Bhl** must be cancelled by **Bhl**0000 before entering **Bil**0200 or whatever; however, further notice that at the end of the job shown in the diagram no **Bhl**0000 is necessary as the **Bs** turns off the V-I-P. Restarting the V-I-P by pressing the Run button automatically enters **Bhl**0000 along with all other possible cancellations, **Brx**, etc.

QUESTIONS

(1) An automatic hanging indent instruction of 2½ picas would be coded (a) **Ƀhl**0200; (b) **Ƀhl**021; (c) **Ƀhl**0206; (d) **Ƀil**0206. a b c d

(2) An automatic hanging indent indent of 2¼ picas would be (a) **Ƀhl**0203; (b) **Ƀil**0203; (c) **Ƀhl**0200; (d) **Ƀh**0203. a b c d

(3) **Ƀhl**0000 is always necessary when switching from **Ƀhl** to **Ƀil**, within a job. T F

(4) The correct instruction for setting ragged right matter is (a) **Ƀrl**; (b) **Ƀrr**; (c) **Ƀrx**; (d) **Ƀr**. a b c d

(5) In most instances it is wise to put **Ƀg** in at the beginning of jobs to be set (a) justified; (b) ragged; (c) hanging; (d) hyphenated. a b c d

(6) The correct instruction to cancel hyphenation is (a) **Ƀe**; (b) **Ƀg**; (c) **Ƀrx**; (d) **Ƀh**. a b c d

(7) **Ƀhl** and **Ƀrr** cannot be used together. T F

(8) When **Ƀhl** or **Ƀil** are entered only a QL at the end of each paragraph is necessary to continue hanging paras. T F

(9) The cancellation code **Ƀhl**0000 is always necessary when switching to **Ƀil** or justified, but is not necessary at the termination of a job where the **Ƀs** is to be used. T F

(10) The **Ƀm**000. is to add space between lines. The additional space thus obtained appears above the line in which **Ƀm**000. is included. If the period is forgotten the following character or code will take its place. T F

(11) **Ƀ,**04 is to (a) reduce space between characters by 4/9 of one point; (b) add space between characters of 4/9 of one point; (c) letterspace; (d) reduce space between lines by 4 points. a b c d

(12) The **Ƀ,** instruction must be followed by **Ƀ,**00 at the completion of a kerned word or line. T F

18	180
6	2500

1c

STUDENT SERVICES

+6

The student services office administers a wide variety of activities directly related to students' well-being; these include a health center on each campus, athletics and recreation, counselling services, financial assistance, living accommodation, OHIP, placement, and student organizations.

10	111
4	

10	111
4	

1c pi

+6

A Health Centre is located on each campus, staffed by registered nurses, with a physician available for consultation on an appointment basis. Students are requested to complete a health history form, and medical examinations are required for admission to some programs.

+3

Services available include health counselling, health education programs, emergency care, supportive care following minor injuries and illness, immunization against tetanus, poliomyelitis and smallpox; and referrals to medical facilities, campus counselling services, or community agencies.

+3

Free chest x-ray facilities are provided by the Toronto Chest Clinic for students who have not had a recent chest x-ray or tuberculin test; forms and detailed information are available at the campus health centre.

+6

Athletics is a program in which every student is eligible to participate. The athletic director operates an intramural program of inter-class competitions involving touch football, floor hockey, basketball, pushball, baseball, etc. The College, is a member of the Ontario Colleges Athletic Association, competes in various inter-college sports, such as basketball, volleyball, soccer, and hockey on an exhibition basis.

The Athletic department also organizes a variety of recreational club programs such as the scuba club, the archery club, the table-tennis club, the curling club, the tennis club, the yoga club, etc. Clubs for any athletic activity may be organized by calling a meeting of interested students, electing officers, and submitting a constitution to the athletic director for approval.

Counselling Services are available on each campus to provide educational, vocational, and personal counselling on request; further information may be obtained by telephoning (416) 967-1212.

Financial Assistance under the terms of the Ontario Student Awards Program or of the Canada Student Loans Plan may be available for applicants for admission post-secondary program.

Result:

Student Services

The student services office administers a wide variety of activities directly related to students' well-being; these include a health center on each campus, athletics and recreation, counselling services, financial assistance, living accomodation, OHIP, placement, and student organizations.

A Health Centre is located on each campus, staffed by registered nurses, with a physician available for consultation on an appointment basis. Students are requested to complete a health history form, and medical examinations are required for admission to some programs.

Services available include health counselling, health education programs, emergency care, supportive care following minor injuries and illness, immunization against tetanus, poliomyelitis and smallpox; and referrals to medical facilities, campus counselling services, or community agencies.

Free chest x-ray facilities are provided by the Toronto Chest Clinic for students who have not had a recent chest x-ray or tuberculin test; forms and detailed information are available at the campus health centre

Athletics is a program in which every student is eligible to participate. The athletic director operates an intramural program of inter-class competitions involving touch football, floor hockey, basketball, pushball, baseball, etc. The College, as a member of the Ontario Colleges Athletic Association, competes in various inter-college sports, such as basketball, volleyball, soccer, and hockey on an exhibition basis.

The athletic department also organizes a variety of recreational club programs such as the scuba club, the archery club, the table-tennis club, the curling club, the tennis club, the yoga club, etc. Clubs for any athletic activity may be organized by calling a meeting of interested students, electing officers, and submitting a constitution to the athletic director for approval.

Counselling Services are available on each campus to provide educational, vocational, and personal counselling on request; further information may be obtained by telephoning (416) 967-1212

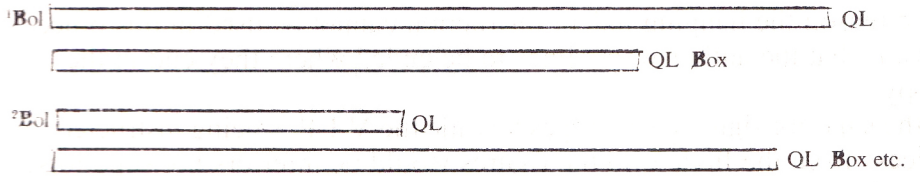
Financial Assistance under the terms of the Ontario Student Awards Program or of the Canada Student Loans Plan may be available for applicants for admission to a post-secondary program.

Objective 13

Text Determined Auto Indent

In this instruction the amount of indent is the distance from the margin (right or left) to the point of instruction entry. **Bol** is for a left hand indent and **Bor** is for a right hand indention; **Box** cancels the indention. In this objective we will only use **Bol**.

This instruction is extremely useful especially for the problem presented by this assignment. Note in the diagram below that a superior figure is required to hang in the margin and each line has a pre-determined ending point; because of this **Bhl** cannot be used because the exact unit value of the hanging portion would have to be worked out to have a neat hanging indent. The problem is solved very easily by use of **Bol** and **Box**.



However, before setting is commenced check the copy. Notice that the superiors go up to double figures (1 to 17). If the superior 1 is typeset and then **Bol** when the double figures are reached in the setting the single superiors will align with the 1 of 10 instead of the 0 or units column of the double figures. To overcome this problem it is necessary to insert a space before each single superior equal to the width of a superior. When the double figures are reached this space will be dropped the tens column taking its place. See diagram below.

To find out the width of a superior figure it is necessary to turn to the manufacturers typeface width sheets. As the assignment is in Times Roman turn to its character width sheet; find *Superior Figure 0* and note that the width of this superior and, indeed, all superiors *in this typeface is 7 units*. Therefore 7 units must be placed in front of all single superiors in this job in order to have it correctly aligned.

Further note that there is no 7 unit space available at the keyboard and therefore one has to built up out of other available units. Again, check the width sheet and note that the thin space (see bottom of second column from left) is in this typeface 6 units; also, remember that *shift paper feed* will give a +1 unit space. One thin space plus one shift paper feed will give the desired space before the single superior figures.

QUESTIONS

(1) ↓means (a) inferior figure; (b) superior figure; (c) take down to baseline; (d) figure one. a b c d

(2) A single line under words means (a) set in Roman; (b) set in Italic; (c) boldface; (d) underline. a b c d

(3) The em dash in the copy following the underlined words is typeset as follows (a) Italic shift 8; (b) Roman shift 8; (c) the dash to the right of the p at the keyboard; (d) bold shift 8. a b c d

(4) Copy will remain indented after the setting of **Bol** (and at this point) until cancelled by B ox. T F

(5) Consult A-48 width chart. The thin space is the same width as the period and comma; and, the en space is the same width as the normal non-superior figures. This is true of all V-I-P fonts. T F

(6) A space is not normally placed after a superior figure. T F

(7) The phrase "line for line" means, set the copy ending lines where copy lines end. T F

(8) One reason the hanging indent instruction cannot be used in this objective is that the author wants lines to be ended where they end in the copy. T F

(9) If the superior figures were typeset while the V-I-P is being instructed to access from the Italic grid the figures would be inferiors not superiors. T F

(10) **B.**04 is the instruction required to *add* 4/9 of one point between letters. A period in instructions means add. T F

When you are confident you understand all the problems in this objective and have answered the test above typeset the copy overleaf.

Note: See information regarding supershifting; and information regarding one unit spaces.

Remember that this assignment is Times Roman and the fi and fl ligatures should be used for best typographic appearance. Make sure the **Box** is placed after the QL.

12	120
1	3500

P.04 BIBLIOGRAPHY +5½

1 Breasted, James Henry, A History of Egypt – EM DASH

Charles Scribner's Sons New York, 1905 +1½

2 Budge, Sir E. A. W.,

Easy Lessons in Egyptian Hieroglyphics +1½

3 Buck, Carl Darling, The Letter Y -

The Many Anniversary Studies,

University of Chicago Press, 1923 +1½

4 Diringer, David, The Alphabet -

The Philosophical Library Inc. New York, 1948 +1½

5 Diringer, David, Writing - Niemegen, 1962 +1½

6 Doblhofer, Ernest, Voices in Stone -

Souvenir Press, London, 1961 +1½

7 Ege, Otto F., The Alphabet +1½

8 Erman, A., Life in Ancient Egypt +1½

9 Gardiner, Sir Alan Henderson, Egyptian Grammar -

Clarendon Press, Oxford, 1927 +1½

10 Hartleben, Hermine, Champollion -

Weidman, Berlin, 1906 +1½

11 Gelb, I. J., A Study of Writing -

University of Chicago Press, 1952 Sec. Ed., 1963 +1½

12 Hughes, John P., An Introduction to Linguistics -

Random House, 1962 +1½

13 Jensen, Hans, Die Schrift in Vergangenheit

und Gegenwart - Berlin, 1958

09	091
1	3500

+1½
14 Murray, Margaret A., Elementary Egyptian Grammar - Bernard Quaritch, London, 1932
+1½
15 Renouf, Sir Peter LePage, An Elementary Grammar of the Ancient Egyptian Language in the Hieroglyphic Type - Samuel Sagster & Sons, London, 1875
+1½
16 Taylor, Isaac, The Alphabet - Kegan, Paul, Trench & Co., London, 1883
+1½
17 Toby, L. F., The Art of Hebrew Lettering - Israel Publishing Co. Ltd., Tel Aviv, 1960, 3rd Ed.

Result:

BIBLIOGRAPHY

[1]Breasted, James Henry, *A History of Egypt*—
Charles Scribner's Sons New York, 1905

[2]Budge, Sir E. A. W.,
Easy Lessons in Egyptian Hieroglyphics

[3]Buck, Carl Darling, *The Letter Y*—
The Many Anniversary Studies,
University of Chicago Press, 1923

[4]Diringer, David, *The Alphabet*—
The Philosophical Library Inc., New York, 1948

[5]Diringer, David, *Writing*—Niemegen, 1962

[6]Doblhofer, Ernst, *Voices in Stone*—
Souvenir Press, London, 1961

[7]Ege, Otto F., *The Alphabet*

[8]Erman, A., *Life in Ancient Egypt*

[9]Gardiner, Sir Alan Henderson, *Egyptian Grammar*—

[10]Hartleben, Hermine, *Champollion*—
Weidman, Berlin, 1906

[11]Gelb, I. J., *A Study of Writing*—
University of Chicago Press, 1952 Sec. Ed., 1963

[12]Hughes, John P., *An Introduction to Linguistics*—
Random House, 1962

[13]Jensen, Hans, *Die Schrift in Vergangenheit
und Gagenwart*—Berlin, 1958

[14]Murray, Margaret A., *Elementary Egyptian
Grammar*—Bernard Quaritch, London, 1932

[15]Renouf, Sir Peter LePage, *An Elementary Grammar
of the Ancient Egyptian Language in the Hieroglyphic
Type*—Samuel Sagster & Sons, London, 1875

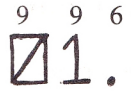
[16]Taylor, Isaac, *The Alphabet*—
Kegan, Paul, Trench & Co., London, 1883

[17]Toby, L. F., *The Art of Hebrew Lettering*—
Israel Publishing Co. Ltd., Tel Aviv, 1960, 3rd Ed.

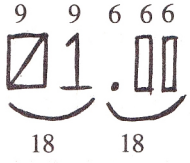
Objective 14

To set hanging signatures

In this objective the copy is to be justified with a signature hanging in the margin. This job could be set using **Bol** and **Box**; however, a little forethought and using the width chart can save many keystrokes. Again, the signatures (1, 2, 3, 4 etc.) run up to double figures. Consulting the width chart used for the previous assignment it is found that Times figures are 9 units wide; therefore, in front of single figures it is necessary to place a 9 unit space. The period following the figures has a width value of 6 units:



Recall that an em space (which is the same width as the point size) contains 18 units. The above diagram shows that the total number of units thus far accumulated is 24, or 1 em space and 6 units. Some space is always required after the period and this enables the addition of sufficient units to make the signature and space equal to 2 em spaces of the point size, or in this case, 20 points, as the point size is 10 point. The additional units required are 12 or 2 thin spaces. Therefore the setting of each signature requires the sequence shown in the diagram below:



The encoding of **Bhl**0108 (20 points) before the first signature therefore enables the assignment to be typeset easily without troublesome cancellations at the end of each paragraph. The V-I-P resets the hanging indent instruction to the value required automatically. All that has to be remembered is to set *en space, figure, period, two thins* for single figures and *two figures, period, two thin spaces,* where double figures occur. At the end of each paragraph only the QL is required and any paragraph space code. These can be conveniently stored in a memory location.

Typeset the following when the above is thoroughly understood.

When the V-I-P now hangs the signature the text matter will all perfectly align with the figure signatures in the left margin also perfectly aligned.

B304 Oil Seal

18 | 180
3 |

+6

1. Drain the oil from the unit by removing the plug from underside of the transmission case.

+4

2. Remove the pulley from the output shaft (15), taking care not to damage the cast-iron case of the unit, the pulley, the shaft end (see Bulletin 84) or the shaft oil seal (not shown on the drawing).

+4

3. Isolate the machine from the mains supply, note the positions of the cable connections on the motor terminal block so that they can be repeated correctly on assembly, and disconnect the lead.

+4

4. Remove the complete assembly from the machine and continue further assembly on the bench.

+4

5. Separate the motor from the transmission case by removing the four nuts (14, Bulletin 84).

+4

6. Place to one side the eight cylindrical rubber cushions (10, Bulletin 84) which will fall from the flexible coupling when the motor is withdrawn.

+4

7. Do not disturb the coupling pinion (2) without first noting its position.

+4

8. Inspect the oil seal (not shown on the drawing) on the input shaft and, if necessary, replace.

+4

9. Note that the motor flange (13, Bulletin 84) has a small groove to permit any weepage from the oil seal to escape past the mating flange faces: when the motor is fitted (instruction 28) make certain that the groove is

in the same position, i.e. at the base of the assembly.

10. Remove the socket screw (16) and withdraw the torsion spring (17), bearing in mind that the end coils of the spring are engaged in the slots of the screws (16 & 18).

11. Run back the screw (18) by one or two turns.

12. In preparation for the removal of the output housing (19), lightly centre-mark the adjacent faces of its flange and the transmission case (5) so as to repeat its original position on re-assembly (instruction 25). This is important since oil entry ducts for the bearings, etc. must be aligned correctly.

13. Remove the screws (11) and take off the output housing, together with the disc (9) and the output spindle (8). Item (6) is a reservoir which feeds oil (via the central duct in the output spindle) to the thrust cams (14 & 20).

14. If the output disc (9) requires re-gringing or replacement, this together with the spindle (8) and thrust cam (20), must be removed from the housing (19). The disc is secured on its spindle by a self-locking taper and a light press will be required to effect the separation.

Result:

Oil Seal

1. Drain the oil from the unit by removing the plug from the underside of the transmission case.
2. Remove the pulley from the output shaft (15), taking care not to damage the cast-iron case of the unit, the pulley, the shaft end (see *Bulletin 84*) or the shaft oil seal (not shown on the drawing).
3. Isolate the machine from the mains supply, note the positions of the cable connections on the motor terminal block so that they can be repeated correctly on assembly, and disconnect the lead.
4. Remove the complete assembly from the machine and continue further assembly on the bench.
5. Separate the motor from the transmission case by removing the four nuts (14, *Bulletin 84*).
6. Place to one side the eight cylindrical rubber cushions (10, *Bulletin 84*) which will fall from the flexible coupling when the motor is withdrawn.
7. Do not disturb the coupling pinion (2) without first noting its position.
8. Inspect the oil seal (not shown on the drawing) on the input shaft and, if necessary, replace.
9. Note that the motor flange (13, *Bulletin 84*) has a small groove to permit any weepage from the oil seal to escape past the mating flange faces: when the motor is fitted (instruction 28) make certain that the groove is in the same position, i.e. at the base of the assembly.
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12. In preparation for the removal of the output housing (19), lightly centre-mark the adjacent faces of its flange and the transmission case (5) so as to repeat its original position on re-assembly (instruction 25). This is important, since oil entry ducts for the bearings, etc. must be aligned correctly.
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14. If the output disc (9) requires re-grinding or replacement, this together with the spindle (8) and thrust cam (20), must be removed from the housing (19). The disc is secured on its spindle by a self-locking taper and a light press will be required to effect the separation.

Objective 15

To cause the V-I-P to automatically indent

The Bell code followed by the character i and four digits will cause the job to be indented by the number of picas and points indicated by the four digits. This indention is exactly the same in operation as the Bell h command. The only differences being the use of a letter i instead of h and the fact that no *hang* occurs.

The V-I-P output runs as before in the unjustified mode.

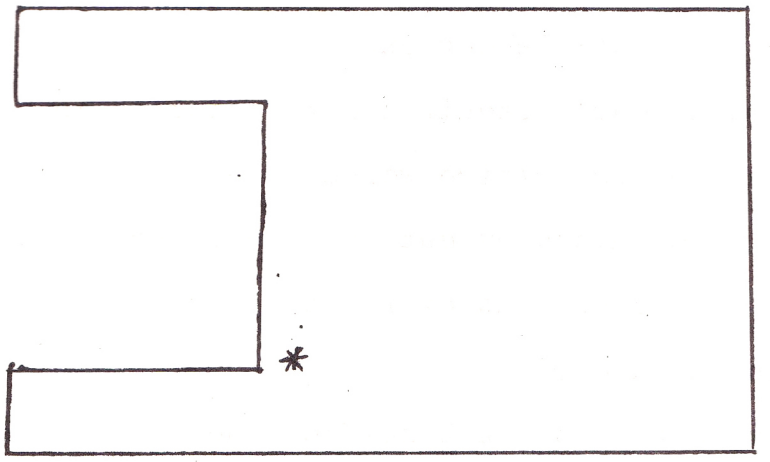
e.g. For an indention of 3½ picas the coding would be

Bil0306

Write out the following translations into indention codes and show to the instructor before proceeding:

(a) 5 picas .....
(b) 6½ picas .....
(c) 4½ picas .....
(d) 5 picas and 3 points .....

LAYOUT



10 / 11½ Times Roman

24 picas

Indent 6½ picas

* Remember to end the indented part of the job with **Bi**0000

10 Times Roman
11½ [24 picas]

Although the adult does not need energy for growth and development, the body has continued need of maintenance and repair materials, consequently, the principles outlined in Canada's Food Guide should still be appliedxin the adult diet. Good nutrition is essential for good health and good looks. The individual should not impair his usefulness, and risk becoming a charge on society, through failing to eat the recommended foods.

indent 6½ picas

The working man's food plan should depend on the type of work he is doing, the hours he works, and whether or not he carries a lunch. Physical exertion is a factor which affects his energy requirements. The man doing heavy manual labour expends much more energy and consequently requires more calories in his diet than does the office worker. The extra calories can be obtained by eating larger quantities of foods and by introducing extra fats, starches, and sugars in the diet.

Labourers who work on unusual shifts tend to deviate from the conventional meal pattern. Even though food is eaten at unusual times, the Food Guide should be applied. If a lunch is carried it should supply one-third of the daily food. The foods packed in a lunch are as important as those eaten for breakfast and dinner. The lunch pattern suggested on page 18 for the school child gives a basis for planning.

Result:

Although the adult does not need energy for growth and development, the body has continued need of maintenance and repair materials, consequently, the principles outlined in Canada's Food Guide should still be applied in the adult diet. Good nutrition is essential for good health and good looks. The individual should not impair his usefulness, and risk becoming a charge on society, through failing to eat the recommended foods.

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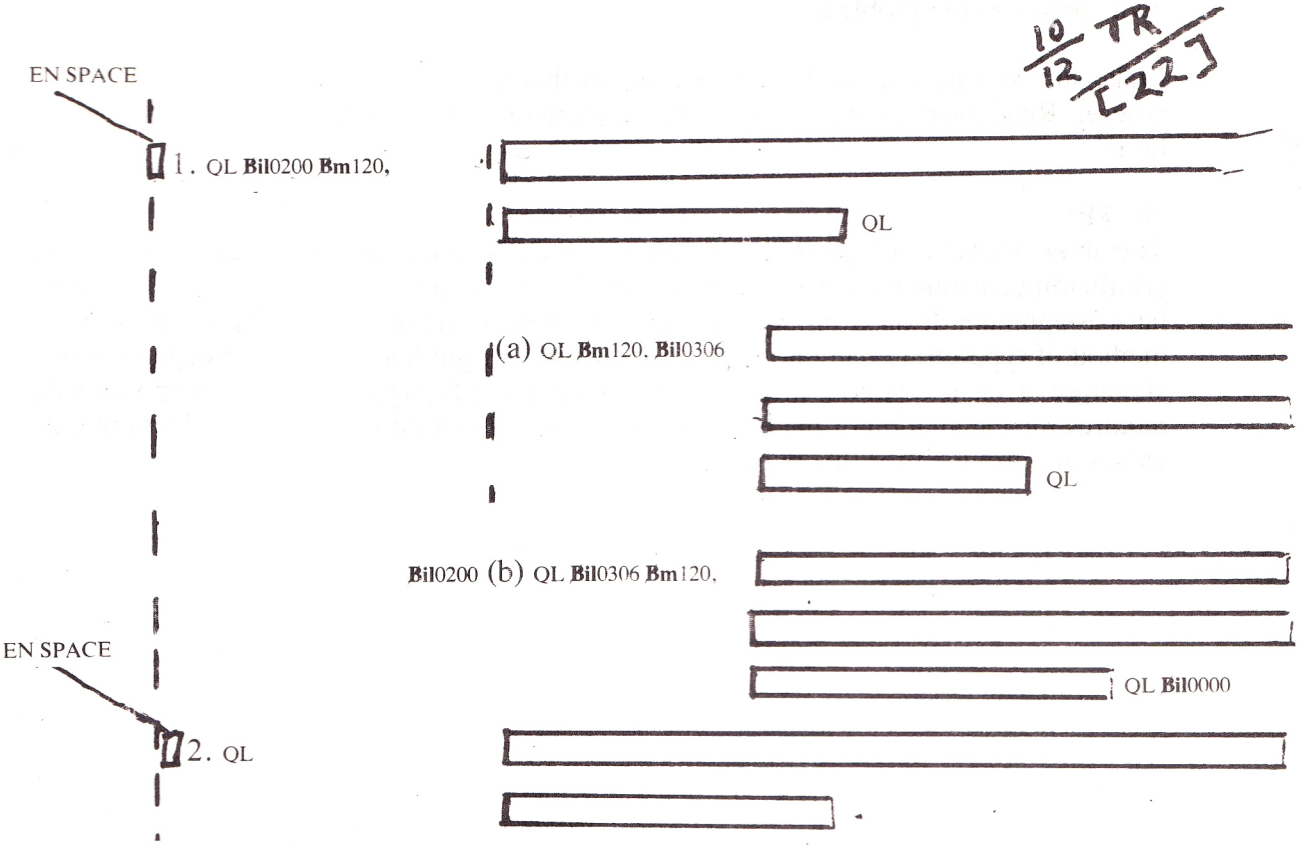
Objective 16

To typeset paragraph signatures using the Automatic Paragraph Indent and the Supplementary Film Advance instructions

In the diagram below it can be seen that fairly lengthy strings of instructions have been used to achieve the desired results. In a production situation these commands would normally be stored in programmable keys at the keyboard or within the V-I-P's format storage memory. Programming methods will be taught in a later objective, for now it is preferable that the beginning operator learns the long method firstly.



NOTES:
Bm121. = +12½ pts
Bm121, = −12½ pts (from the *existing film advance*)

If **Bm**091. was used in a line *that line* would have 9½ points added to its film advance. Should (**Bm**091,) be used the line would have 9½ points subtracted from its film advance. Therefore the period instructs the machine to add the value indicated and the comma instruct it to subtract the value indicated.

NOTE:
Subtraction may only be used to reduce the existing film advance to zero (i.e. cancel the line advance); it may not be used to subtract beyond zero; if it is, erroneous film advance will result. If more than one Supplementary Film Advance command is used in one line only the *last* one encountered will be carried out. This command only applies to the line in which it is placed.

In the diagram above, the signature is typeset first and quadded left (en space 1. QL). This is followed by the command **Bi**0200 to establish a two pica indent. Following this (**Bm**120,) is keyed which negates the 12 point line advance (10/12 becomes 10/0) causing the first line of text to be exposed in the *same line* as the paragraph signature (en space 1.). This kind of procedure is followed throughout merely the amount of indent changing as needed for the different levels of sub paragraphs.

The first and second level signature indentions are mapped out in the diagram preceding this note; however, the third level signature (i), (ii), requires the operator to work out his own answer to the problem.

Make sure you have a good understanding of this technique before you commence to typeset. Read over several times, mentally going over the reasons for the various instructions.

NOTE:
The above method of typesetting hanging signatures would only be acceptable to undiscriminating customers, unless the customer desired the above for some special reason. A later assignment deals with the same problem only from the angle of the traditional method of typesetting hanging signatures, where, a right hand alignment of the various signatures is insisted upon; however, this latter, more typographically correct, method, requires the calculation of the exact width of each signature in points and charts of unit values are provided for this purpose.

10 | 120
1 | 2200

1. Class instruction is to be presented by the associate teacher and observed by the student teacher.

(a) Observe and record all instances of class instruction presented by the associate teacher.

(b) In making this record you should have the following points in mind: grade, topic of lesson, aim of lesson, type of lesson, subject matter and the remarks of the associate teacher and/or the student teacher.

2. Courses of study. Investigate the courses of study being taught in this shop and report as follows:

(a) Make copies of the pupil's timetables for four of the classes which appear on the associate teacher's timetable. One for each year of the course if possible.

(b) Determine the following by examining the class timetables:

(i) In what year of the course does specialization, if any, occur?

(ii) Calculate the percentage of time allotted to shopwork in each grade.

(iii) Identify the major shop and list the related shops for two of the classes.

3. Analyse three operations or laboratory procedures and three theory topics pertinent to the practical work being done in the classes and record the teaching points in each case.

4. The report which the student teacher will produce must consist of the following completed data:

(a) Your written preparation for anticipated needs in individual and group instruction.

(b) Your report of associate teacher presentations of instructions.

(c) Your findings on course of study investigation containing the necessary graphs and histograms.

(d) Your record of teaching points for operations and information topics as prepared in section 3 above.

5. Individual instruction is to be presented by the student teacher and observed by the associate teacher.

Your associate teacher will permit you to assume responsibility for instructing individuals as the occasion arises. This is not to be construed only as passing a helpful remark concerning the work of students you happen to observe, but rather as a formal teaching situation.

The instructor will select certain classes for which you are to be responsible for the presentation of the necessary individual instruction concerned. It is your duty to present individual instruction to those who come to you or are directed to you by the associate teacher.

Result:

1. Class instruction is to be presented by the associate teacher and observed by the student teacher.
   (a) Observe and record all instances of class instruction presented by the associate teacher.
   (b) In making this record you should have the following points in mind: grade, topic of lesson, aim of lesson, type of lesson, subject matter and the remarks of the associate teacher and/or the student teacher.
2. Courses of study. Investigate the courses of study being taught in this shop and report as follows:
   (a) Make copies of the pupil's timetables for four of the classes which appear on the associate teacher's timetable. One for each year of the course if possible.
   (b) Determine the following by examining the class timetables:
      (i) In what year of the course does specialization, if any, occur?
      (ii) Calculate the percentage of time allotted to shopwork in each grade.
      (iii) Identify the major shop and list the related shops for two of the classes.
3. Analyse three operations or laboratory procedures and three theory topics pertinent to the practical work being done in the classes and record the teaching points in each case.
4. The report which the student teacher will produce must consist of the following completed data:
   (a) Your written preparation for anticipated needs in individual and group instruction.
   (b) Your report of associate teacher presentations of instructions.
   (c) Your findings on course of study investigation containing the necessary graphs and histograms.
   (d) Your record of teaching points for operations and information topics as prepared in section 3 above.
5. Individual instruction is to be presented by the student teacher and observed by the associate teacher.

   Your associate teacher will permit you to assume responsibility for instructing individuals as the occasion arises. This is not to be construed only as passing a helpful remark concerning the work of students you happen to observe, but rather as a formal teaching situation.

   The instructor will select certain classes for which you are to be responsible for the presentation of the necessary individual instruction concerned. It is your duty to present individual instruction to those who come to you or are directed to you by the associate teacher.

Objective 17

To store and Recall information using the memory of the V-I-P

In the first example below, the format 9/11½ pt, font 1, 24½ picas, has been stored in the V-I-P's memory *Block 1*; and in the second example the sentence 'Printed at GBC' has been stored in memory *Block 2*. The illustrations show how this is done. The operator places the information he wishes to store between a STORE instruction (**Bqs**01) and an END STORE instruction (**Bqe Bs**). This enables the V-I-P to retain the bracketed information which may then be *recalled* by the operator simply by the keyboarding of the appropriate RECALL instruction (in example 1 **Bqu**01, in example 2 **Bqu**02).

Illustrations

Store Instruction End Store instruction
Bell qs 01 **B**p09 **B**f111 **B**1 **B**l2406 *Bell qe Bell s* Recall **B**qu01

Store Instruction End Store instruction
Bell qs 02 Printed at GBC *Bell qe Bell s* Recall Bell qu 02

The 12K V-I-P, which is our hypothetical model, has the capacity to store and recall information from 67 blocks in its memory. Each of these blocks is capable of receiving 40 codes of information which can then be recalled as described above. A caution is due here: as only 37 of these 40 storage locations may be used to receive information—locations 38, 39 and 40 must be reserved for the end store instruction (Bell qe). This instruction is read into the memory block before it can be recognized as *end store*. A further caution, The *Bell s* must terminate each string of information being stored or machine problems may result.

The resulting tape, containing memories only, is fed into the V-I-P (it will stop after each block—merely press green RUN button.)

TEST

Translate the formats below into the keystrokes necessary to load the V-I-P's internal storage blocks.

(1) 10/10pt Times Roman 30 picas _____

(2) 24/30pt Helvetica Boldface 30 picas _____

(3) 8/14 pt Helvetica Roman 30 picas _____

(4) 14/24pt Times Boldface 30 picas _____

(5) 18/30½pt Helvetica Italic 30 picas _____

(6) The student's name in capitalsQC _____

(7) Give the recall instruction for number 3 above _____

ASSIGNMENT

The student's name as written in (6) above to be output in all of the formats *QC*.

SETTING
e.g. **Bqu**01 JOHN DOE QC **Bqu**02 JOHN DOE QC . . . etc.

Objective 18

To typeset hanging signatures ranged on the right with memory assistance

To achieve the above mode of setting it is necessary to manually set the units of space before the signature (see the diagram below). The hanging figure signature you are already familiarwith; however, note the way in which the (a) is to be set. Two em spaces followed by a 6 unit (Thin space) and a 1 unit (shift PAPER FEED key) space precede the signature itself. A 9 unit space (en space) follows it. These complete sequences of codes making up the signature are equal to the amount of hang called for by the preceding **Bh**0304.

Provided with the copy (which is also an example of what it is to appear like when set) is a chart showing what spaces must be placed in front of each signature to achieve alignment on the right. The number of em spaces to precede the signatures depends on the level of the indention.

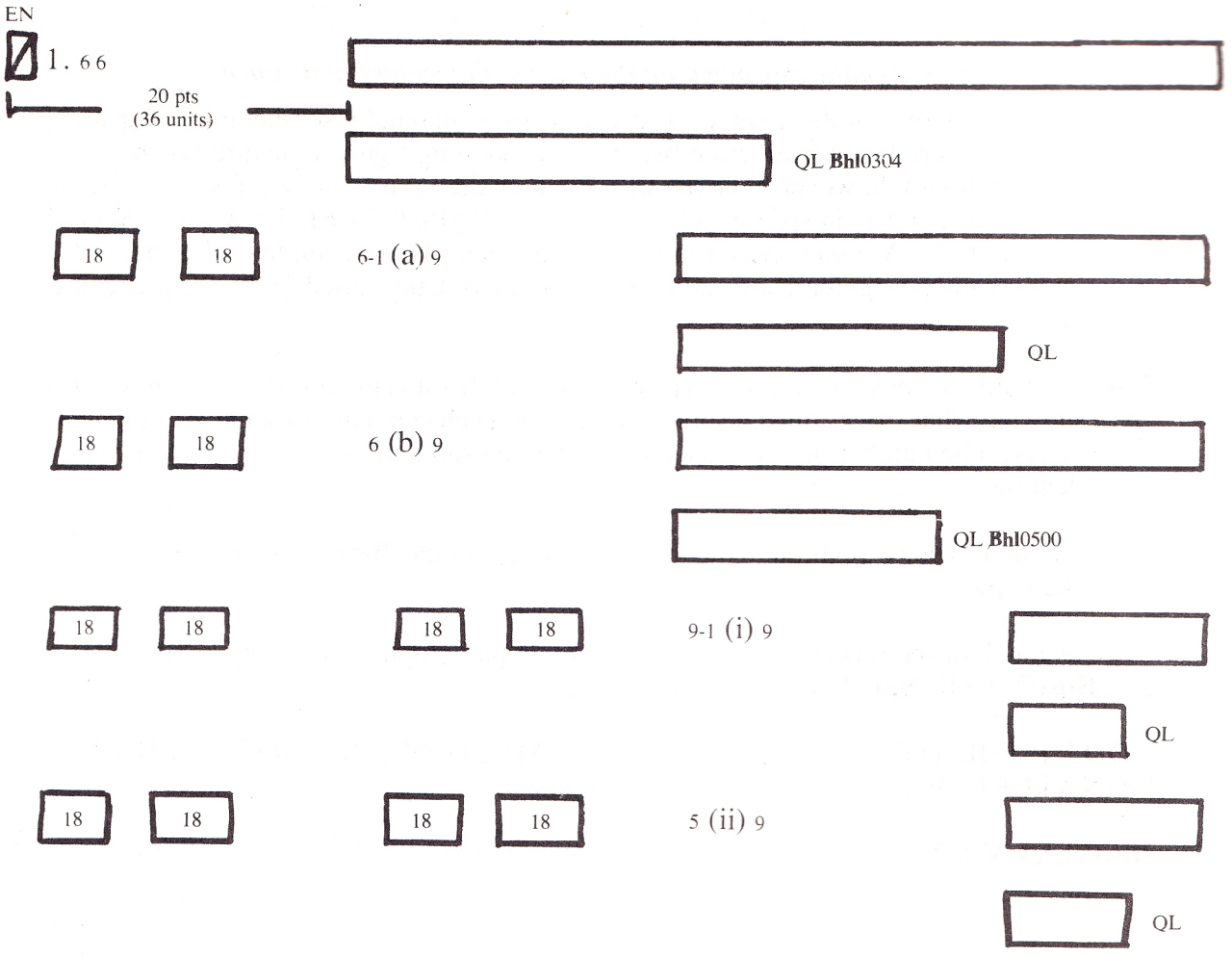
Carefully think your way through the theory embodied in the diagram before commencing to set the copy.

Store as much of the repeated information between paragraphs in memory as possible. e.g. **Bqs**02 = QL **Bhl**0304 em space em space

ADD UP THE TOTAL EM SPACES CONTAINED IN THE FIRST ALPHABET SIGNATURE. Verify it totals 3 picas and 4 points.

Also check V-I-P width charts to obtain character widths

QL **Bhl**0108



MEMORIES

01 QL **Bhl**0108
02 QL **Bhl**0304 em space em space
03 QL **Bhl**0500 em space em space em space em space
04 **Bm**060.
05 **Bm**030.

Study *how* these memories produce the desired effects on page 18-3 *before* attempting to typeset it.

INDENTION SPACING CHART

See indention spacing chart for unit values needed to precede indention signatures for flush right alignment.

In this chart 6 units = one Thin space
1 unit = Shift PF key
9 units = one Nut (en) space

TYPEFACE

10 on 12 Times Roman 22 picas

09 | 110
1

1. Rule 61 of Regulation 545 of Revised Regulations of Ontario, 1970, as amended by Ontario Regulation 36/73 is further amended by adding a new sub-rule (3) as follows: (2) (5)

align through out as shown

(a) Where issues arise otherwise than between plaintiff and defendant and if any party to any such issue makes default in delivering any pleading, the course may, at the trial or on motion, give such judgment as upon the pleadings seems just.(1) (4)

2. Rule 183 of Regulation 545 of Revised Regulations of Ontario, 1970, is amended by striking out after the words "within the jurisdiction of the Master" the words "that require to be heard immediately or promptly"

3. Rule 498 of Regulation 545 of Revised Regulations of Ontario, 1970, as amended by Ontario Regulation 115/72, is revoked and the following substituted therefor:

3 498. In all cases, other than an appeal from an interlocutory order.

(a) The appeal shall be set down for hearing by filing in the office of the Registrar the notice of motion and proof of service within five days after service. At the same time there shall be left with the Registrar proof that the copies of the evidence required for use upon the appeal have been ordered.

(b) the appelant shall within thirty days after setting down the appeal, or within fifteen days after the evidence is ready, whichever is later, cause to be filed with the Registrar the record, exhibits and evidence, and proof of service of the Appellant's Statement.

rom num. align to right →

(i) an index,

(ii) the pleadings,

(iii) the pleadings,

(iv) the judgement or order appealed from,

(v) the reasons for judgment,

(vi) such of the exhibits filed as are documents or parts of documents and which are material to be hearing of the appeal, in order of the dates of such documents.

(c) the appelant shall contemporaneously with the lodging of the appeal book with the Registrar, serve each of the other parties to the appeal with a copy thereof together with a copy of the evidence. If the evidence has not thennbeen received from the reporter, it shall be served forthwith after it is ready;

(d) where compliance with the rule as to appeal books would cause undue expense or delay, a judge of the appellate court may give special directions;

(e) as soon as the record, exhibits, and proof of service of the Appelant's Statement have been filed, and the appeal book and evidence have been lodged with the Registrar, the appeal shall be deemed to be perfected, and

Result:

1. Rule 61 of Regulation 545 of Revised Regulations of Ontario, 1970, as amended by Ontario Regulation 36/73 is further amended by adding a new sub-rule (3) as follows: (2) (5)
   (a) Where issues arise otherwise than between plaintiff and defendant and if any party to any such issue makes default in delivering any pleading, the course may, at the trial or on motion, give such judgment as upon the pleadings seems just. (1) (4)
2. Rule 183 of Regulation 545 of Revised Regulations of Ontario, 1970, is amended by striking out after the words ''within the jurisdiction of the Master'' the words ''that require to be heard immediately or promptly''.
3. Rule 498 of Regulation 545 of Revised Regulations of Ontrario, 1970, as amended by Ontario Regulation 115/72, is revoked and the following substituted therefor:

   498. In all cases, other than an appeal from an interlocutory order.

   (a) The appeal shall be set down for hearing by filing in the office of the Registrar the notice of motion and proof of service within five days after service. At the same time there shall be left with the Registrar proof that the copies of the evidence required for use upon the appeal have been ordered.
   (b) the appelant shall within thirty days after setting down the appeal, or within fifteen days after the evidence is ready, whichever is later, cause to be filed with the Registrar the record, exhibits and evidence, and proof of service of the Appellant's Statement.
      (i) index,
      (ii) the pleadings,
      (iii) the pleadings,
      (iv) the judgement or order appealed from,
      (v) the reasons for judgment,
      (vi) such of the exhibits filed as are documents or parts of documents and which are material to be hearing of the appeal, in order of the dates of such documents.
   (c) the appelant shall contemporaneously with the lodging of the appeal book with the Registrar, serve each of the other parties to the appeal with a copy thereof together with a copy of the evidence. If the evidence has not then been received from the reporter, it shall be served forthwith after it is ready;
   (d) where compliance with the rule as to appeal books would cause undue expense or delay, a judge of the appellate court may give special directions;
   (e) as soon as the record, exhibits, and proof of service of the Appellant's Statement have been filed, and the appeal book and evidence have been lodged with the Registrar, the appeal shall be deemed to be perfected, and

2 EMS

6-1(a)9 ROMAN
6(b)9
6-1(c)9
6(d)9
6-1(e)9
9(f)9
6(g)9
6(h)9
9-1(i)9
9-1(j)9
6(k)9
9-1(l)9
1(m)9
6(n)9
6(o)9
6(p)9
6(q)9
9(r)9
6-2(s)9
9-1(t)9
6(u)9
6(v)9
2(w)9
6(x)9
6(y)9
6-1(z)9

6(a)9 ITALIC
6(b)9
6-1(c)9
6(d)9
6-1(e)9
9-1(c)9
6(g)9
6(h)9
9-1(i)9
9-1(j)9
6-1(k)9
9-1(l)9
2(m)9
6(n)9
6(o)9
6(p)9
6(q)9
6-2(r)9
6-2(s)9
9-1(t)9
6(u)9
6-1(v)9
3(w)9
6-1(x)9
6-1(y)9
6-2(z)9

This table shows the combination of EN, EM and add-point spaces required to make-up 2 Ems of space for each letter in the Times Roman and Times Roman Italic fonts.

2 EMS

9-1(i)9 ROMAN
5(ii)9
0(iii)9
1(iv)9
6(v)9
1(vi)9

Objective 19

To set a simple 3 column table

On the V-I-P it is possible to typeset tables having up to 20 columns each with a different pica and point measure. Within a tab column it is possible to use any typesetting mode (QL, QC, QR, JUSTIFY, AUTOMATIC LEADER, HANGING INDENT . . . etc.). However, in the case of the hanging indent or the indent instruction these would affect and apply to *every* column; therefore these instructions have a limited application

Column widths are entered in picas and points (similar to the line length entry); however, they must be preceded by *Bell x* (set up widths) and succeded by *Bell y* (end set up of widths). The digits making up the column measures are strung between these two instructions with a word space (spaceband) placed between each.

Example Table to have measures of 8 picas, 3 picas, 4½ picas

Bx0800 0300 0406**By**

Note that no space is placed between the **Bx** and the first measure or between the final measure of the table and the **By** instruction. The total of the measures thus entered must not exceed the maximum line length capability of the V-I-P (in our hypothetical machine 45 picas).

The second step in the setting of a table is to give the instruction *Bell u* (this means *Use tabular*, and also, *Return to column 1). This second instruction is essential* and must follow the **Bx** . . . **By** instruction or problems will result.

The *return to column 1* function of **Bu** is to be used where, say, only 2 of the columns in the table have information in them. A **Bu** entered after the 2nd column ending code will act like a line or carriage return command. e.g.

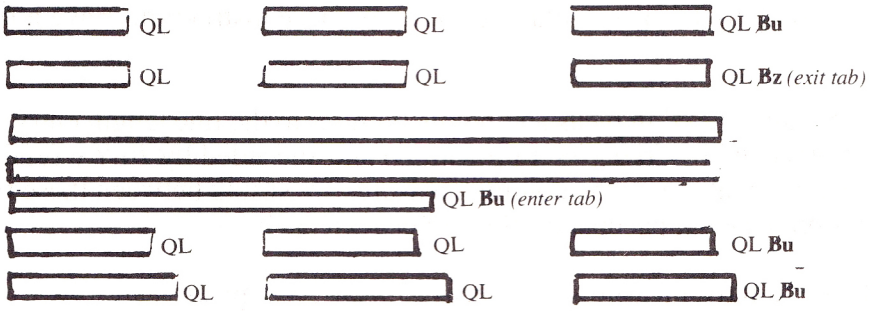
Illustration

Date QL	Time QL	Function QL
Jan. 1 QL	8 am QL	Lecture QL
Jan. 2 QL	9 am QL **Bu**	
Jan. 3 QL **Bu**		

In the above illustration it can also be seen that columns are tabbed by the mode command—in this case QL. QR, QC, and ELEVATE also terminate columns while giving the information the mode desired. If four columns have been entered between the **Bx** . . . **By** the V-I-P will automatically advance one line when it reads the fourth mode command in the line being set. A common fault in beginners is to omit or overlook one of the columns; from the above information it can be seen that the columns would all run back and the job would be a write-off. Careful! If the table was extremely complex and the operator felt that the omission of a column likely at some point; he could eliminate the danger of a run-back by ending each line with **Bu**following his last mode command.

There are jobs which frequently require the setting of tables within paragraphs of straight text repeatedly. Here it would be necessary to pass from tabular mode to straight text or justified mode and back again. To exit from tab a third instruction is provided, *Bell z*. The V-I-P on reading this instruction will now output referring to the line length *measure* (entered at some time previous) and *ignore* the *tabulation measures*. To re-enter tab **Bu** is keyed. e.g.

Bx0600 0600 0600**By Bu**
Bp09 **Bf**100 **B**2 **B**11800

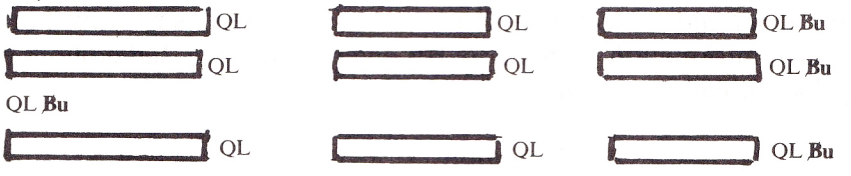


A column may be skipped (left blank) by simply striking a mode instruction.

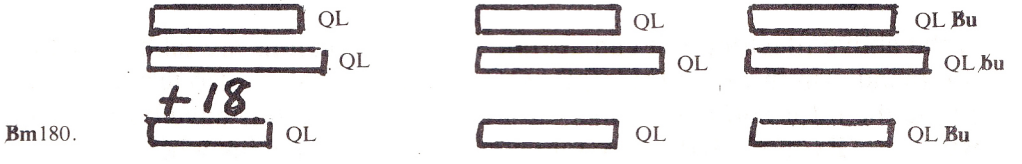
e.g.

An additional line feed (a blank table line) may be obtained by setting one blank column (QL)) followed by **Bu**.

e.g.



An additional line feed greater or less than the **Bf** entry may be obtained by using the **Bm**000. as is done in text matter.



Typefaces are changed within tables in the same manner as within text settings.

Bs does not cancel column measures. These may only be changed by encoding new measure values.

Special note
When using the V-I-P in the justified mode of operation tab column ending codes must be followed by ELEVATE (see Mergenthaler V-I-P Manual for further information).

1000

NEWFOUNDLAND — BF caps in all cases
Sir Humphrey Gilbert
165 Duckworth St.
St. John's, Nfld.

07/080
4/2900

+8 →

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Sydney, N.S.
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NEW BURNSWICK
New Post Office Bldg.
Canterbury St.
Saint John, N.B.
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QUEBEC
165 Dorchester St. S.
Quebec 2, Que.
Telephone: 695-6666

1000

ONTARIO
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Ottawa, Ont.

385-387 Princess St.
Kingston, Ont.
Telephone: 543-5567

New Federal Bldg.
11 Station St.
Belleville, Ont.
Telephone: 967-1212

Mackenzie Bldg.
36 Adelaide St. E.
Toronto 210, Ont.
Telephone: 869-1500

National Revenue Bldg.
150 Main St. W.
Hamilton 10, Ont.
Telephone: 523-4875

move down
Federal Bldg.
32-46 Church St.
St. Catharines, Ont.
Telephone: 688-5444

align with QUEBEC
Federal Bldg.

0900

MANITOBA
Revenue
391 York Ave.
Winnipeg, Man.

SASKATCHEWAN
Income Tax Bldg.
1955 Smith St.
Regina, Sask.
S4P 2N9
Telephone: 525-6161

London Bldg.
306-20th St. E.
Saskatoon, Sask.
S7K 0A8
Telephone: 653-4360

ALBERTA
Calgary Public Bldg.
205-8th Ave. S.E.
Calgary, Alta.
T2G 0L1
Telephone: 265-8890

Federal Public Bldg.
9820-107th St.
Edmonton, Alta.
T5K LE8
Telephone: 425-3510

BRITISH COLUMBIA
Federal Bldg.
251 Nanaimo Ave..W.
Penticton, B.C.
Telephone: 492-6000

Result:

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Sir Humphrey Gilbert
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PRINCE EDWARD ISLAND
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BRITISH COLUMBIA
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Penticton, B.C.
Telephone: 492-6000

Objective 20

To set a table involving dot leader mode within a column

The dot leader instruction may be used within the column of a table in a similar manner as it is used within a normal measure.

Example:
ACC QL 152 QL Bookkeeping **Ƀd** en leader EM EN 3 QL

Produces:
ACC 152 Bookkeeping 3

In the copy following it is necessary to go in and out of tabulation (*Bell*u/*Bell*z) and use the dot leader instruction within one of the columns of this three column table.

COPY

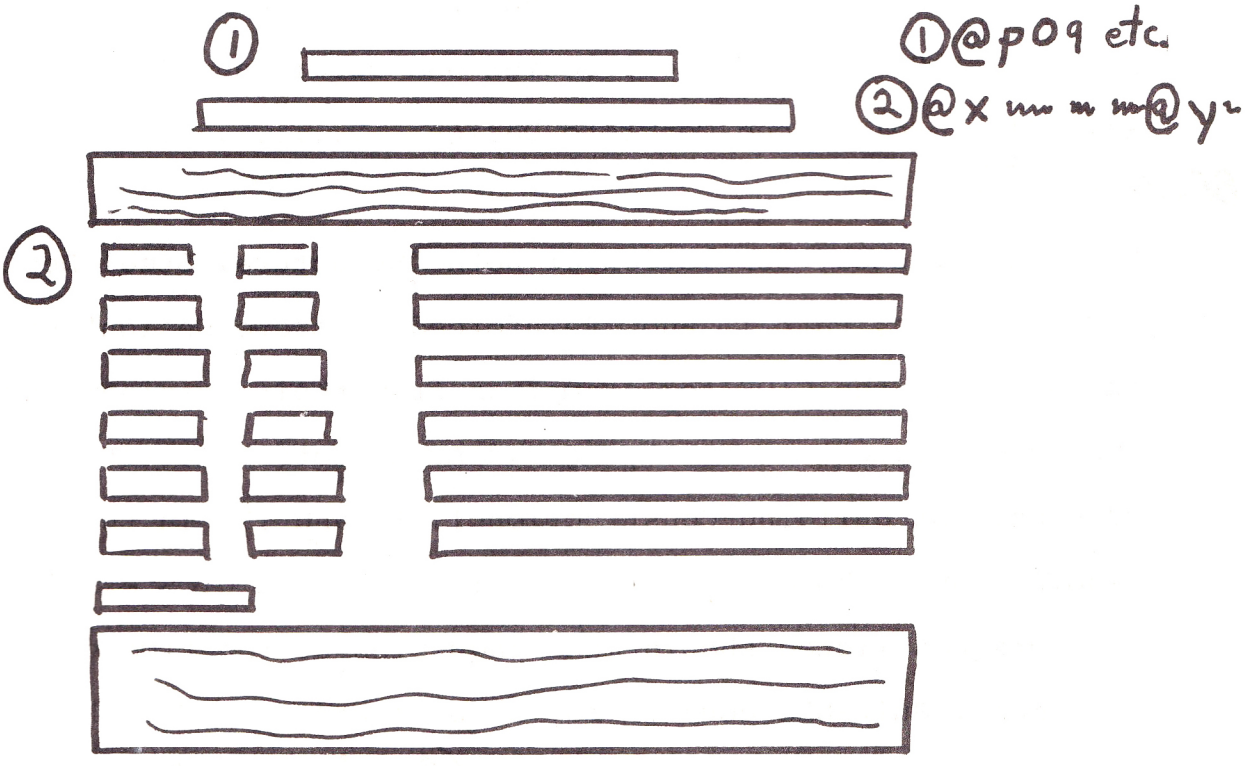
General Instructions
Careful preplanning is essential in work of this nature.

(1) Translate all mark-up's into instruction strings, such as
Ƀp09 **Ƀf**110 **Ƀ**1 **Ƀl**2800.

(2) Number the above strings in the sequence that they occur in the text.

(3) Key the numbers to the copy where they are required.

Do not clutter the copy with long strings of instructions; rather number the copy at the points where instructions are needed and have the strings written on a separate sheet.



CREDIT COURSES FOR

CANADIAN INSTITUTE OF QUANTITY SURVEYORS 1973-74

Upon satisfactory completion of any of the following courses (and subject to the footnotes) students may apply for exemption from the applicable CIQS examinations.

ACC	152	Bookkeeping	33
AS	908	Construction Law	5
CO	101	Quantity Surveying (Part I) and Building Construction Estimating	25
CO	901	Construction Methods and Materials (Building Construction)	26
CO	906	Mechanical and Electrical Systems in Buildings (Part I)	27
CO	907	Mechanical and Electrical Systems in Buildings (Part II)	27
EC	100	Economics	5
DR	900	Architectural Drafting, Part I (Drafting)	28
STR	122	Structural Steel Design and Detailing, Part I	28
STR	218	Reinforced Concrete Design	29

Footnotes:

Upon satisfactory completion of both "Structural Steel Design and Detailing, Part I" and "Reinforced Concrete Design" students may apply to the CIQS for exemption from their examinations in Theory of structure. Surveying and Architectural Drafting now from part of Building Construction I, II and III in the CIQS examinations. Those students who wish to study CIQS examination subjects not listed should make enquiries at the time of enrolment. Suitable courses may be arranged provided the enrolment meets minimum requirements.

(Run-in next page

Students are advised to sonsult CIQS for the new (1973) course outlines before enrolling in any extension courses.

CREDIT COURSES FOR ASSOCIATION OF SURVEY TECHNICIANS AND TECHNOLOGISTS

The following credit courses are offered by the George Brown College:

SURV 101 Plane Surveying.....29

SURV 201 Advanced Plane Surveying.....29

SURV 204 Legal Surveying.....29

Courses are being co-ordinated through the office of the Association. All students interested in these courses should direct their enquiries to:

The Education Committee,
Association of Certified Survey
Technicians and Technologists,
Suite 903,
8 King Street East,
Toronto, Ontario.
Telephone: 364-6898

CREDIT COURSES FOR ASSOCIATION OF ARCHITECTURAL TECHNOLOGISTS OF ONTARIO

The following credit courses are offered by the George Brown College:

CO 101 Quantity Surveying (Part I) and Building Construction Estimating.....25

CO 901 Construction Methods and Materials (Building Construction).....26

Result:

CREDIT COURSES FOR CANADIAN INSTITUTE OF QUANTITY SURVEYORS 1973-74

Upon satisfactory completion of any of the following courses (and subject to the footnotes) students may apply for exemption from the applicable CIQS examinations.

ACC	152	Bookkeeping	33
AS	908	Construction Law	5
CO	101	Quantity Surveying (Part I) and Building Construction Estimating	25
CO	901	Construction Methods and Materials (Building Construction)	26
CO	906	Mechanical and Electrical Systems in Buildings (Part I)	27
CO	907	Mechanical and Electrical Systems in Buildings (Part II)	27
EC	100	Economics	5
DR	900	Architectural Drafting, Part I (Drafting)	28
STR	122	Structural Steel Design and Detailing, Part I	28
STR	218	Reinforced Concrete Design	29

Footnotes:
Upon satisfactory completion of both "Structural Steel Design and Detailing, Part I" and "Reinforced Concrete Design" students may apply to the CIQS for exemption from their examinations in Theory of Structure. Surveying and Architectural Drafting now form part of the Building Construction I, II and III in the CIQS examinations. Those students who wish to study CIQS examination subjects not listed should make enquiries at the time of enrolment. Suitable courses may be arranged provided the enrolment meets minimum requirements. Students are advised to consult CIQS for the new (1973) course outlines before enrolling in any extension courses.

CREDIT COURSES FOR ASSOCIATION OF SURVEY TECHNICIANS AND TECHNOLOGISTS

The following credit courses are offered by the George Brown College:

SURV	101	Plane Surveying	29
SURV	201	Advanced Plane Surveying	29
SURV	204	Legal Surveying	29

Courses are being co-ordinated through the office of the Association. All students interested in these courses should direct their enquiries to:

The Education Committee,
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The following credit courses are offered by the George Brown College:

CO	101	Quantity Surveying (Part I) and Building Construction Estimating	25
CO	901	Construction Methods and Materials (Building Construction)	26

FONT POSITION	CHARACTER	FULL WIDTH	TAPE WIDTH	TAPE WIDTH	FULL WIDTH	CHARACTER	FONT POSITION
24 D	fi	10	7	7	10	fl	24 C
24 B	sup Fig 0	7	4	4	7	Sup Fig 9	24 A
23 D	Sup Fig 8	7	4	4	7	Sup Fig 7	23 C
23 B	Sup Fig 6	7	4	4	7	Sup Fig 5	23 A
22 D	Sup Fig 4	7	4	4	7	Sup Fig 3	22 C
22 B	Sup Fig 2	7	4	4	7	Sup Fig 1	22 A
21 D	)	6	3	3	6	(	21 C
21 B	$	4	6	2	5	/	21 A
20 D	!	6	3	2	5	:	20 C
20 B	?	8	5	11	14	&	20 A
19 D	Em -	18	15	12	15	7/8	19 C
19 B	3/4	15	12	12	15	5/8	19 A
18 D	1/2	15	12	12	15	3/8	18 C
18 B	1/4	15	12	12	15	1/8	18 A
17 D	;	5	2	3	6	Hyphen -	17 C
17 B	Apos '	6	3	3	6	Quote '	17 A
16 D	L'c z	8	5	6	9	L'c x	16 C
16 B	L'c k	9	6	6	9	L'c q	16 A
15 D	L'c p	9	6	6	9	L'c q	15 C
15 B	L'c y	9	6	10	13	L'c w	15 A
14 D	L'c h	9	6	4	7	L'c s	14 C
14 B	L'c n	9	6	6	9	L'c o	14 A
13 D	L'c i	5	2	5	8	L'c a	13 C
13 B	L'c t	5	2	5	8	L'c e	13 A
12 D	L'c f	6	3	2	5	L'c l	12 C
12 B	L'c d	9	6	2	5	L'c j	12 A
11 D	L'c u	9	6	3	6	L'c r	11 C
11 B	L'c m	14	11	5	8	L'c c	11 A
10 D	L'c v	9	6	6	9	L'c b	10 C
10 B	Cap T	11	8	8	11	Cap E	10 A
9 D	Cap I	6	3	10	13	Cap A	9 C
9 B	Cap N	13	10	10	13	Cap O	9 A
8 D	Cap H	13	10	7	10	Cap S	8 C
8 B	Period .	6	3	3	6	Comma ,	8 A
7 D	Cap F	10	7	8	11	Cap L	7 C
7 B	Cap D	13	10	4	7	Cap J	7 A
6 D	Cap U	13	10	9	12	Cap R	6 C
6 B	Cap M	16	13	9	12	Cap C	6 A
5 D	Cap P	10	7	10	13	Cap G	5 C
5 B	Cap Y	13	10	14	17	Cap W	5 A
4 D	Cap V	14	11	9	12	Cap B	4 C
4 B	Fig. 0	9	6	6	9	Fig. 9	4 A
3 D	Fig. 8	9	6	6	9	Fig. 7	3 C
3 B	Fig. 6	9	6	6	9	Fig. 5	3 A
2 D	Fig. 4	9	6	6	9	Fig. 3	2 C
2 B	Fig. 2	9	6	6	9	Fig. i	2 A
1 D	Cap Z	11	8	10	13	Cap X	1 C
1 B	Cap K	13	10	10	13	Cap Q	1 A
	THIN SP.	6	3	6	9	EN. SP.	
	EM. SP.	18	15	6	9	EN. LEADER	

Questions on Diagram B

(1) What function does the en space serve?

(2) If the Quad left instruction was not followed by **Bm**120, what would the resultant print-out appear like?

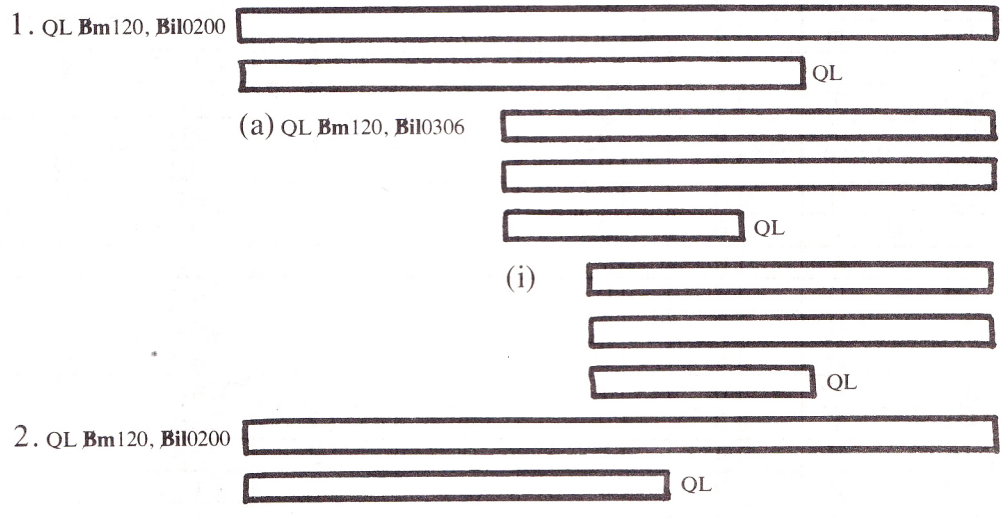
(3) If the **Bil** instructions were omitted how would the print-out then appear?

(4) The **Bil** values are arrived at by toting up the unit values of characters making up the signatures, adding white space between the signature and the text and guessing the amount needed to the nearest whole pica and point value to construct **Bil**. For instance, in the type face and size being used (Times Roman), the en space is 9 units, the figure is 9 units, the period is 6 units. This is a total of 24 units, or 1 em of set and 6 units of set. In 10 pt. type this equals approximately 1 pica and 2 points (1 em of 10 pt. type is 10 pts., 6 units of 10 pt. type is one-third of 10 pts. which is 3 and one third pts.). Approximately 10 pts. is therefore being allowed between the signature and the beginning of the text information.

Consult the Times Roman A-48 width value chart and determine the approximate value of the white space between the '(a)' signature and the beginning of its text?

(5) Imagine that the diagram is to be carried to another level of indention which signatures are going to be (i), (ii), (iii), and (iv). These are to be aligned on the right hand side, in contrast to the above examples. The white space between the signatures and the beginning of the text has to be constant in width but the amount is entirely up to you. On the diagram below write in a possible coding.

DIAG. B



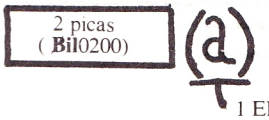
Answers to Questions on Diagram B

(1) The en space is merely a 'space saver' for the possibility of a double figure, such as '10.'. If no double figure was to occur in the report then it would be quite in order to leave out the en space and reduce the width of the indention by this much 5 points.

(2) The text portion of the line would appear on the next line as the Quad Left instruction instructs the output unit to advance a line according to the film advance setting as well as its positioning function.

(3) The omission of the **Bil** instruction would cause the text portion of the line to begin printing at the extreme left hand margin, therefore, overprinting the paragraph signature.

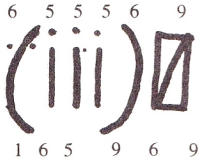
(4) The white space is what is left over after the 2 picas prior to '(a)', and the value of '(a)', in points are subtracted from the **Bil** value (0306):

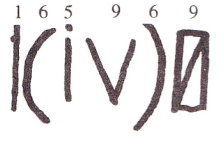


1 EM and 2 units (1 EM = 10 pts, 2 units = 1 pt.)

(3 picas 6 pts) — (2 picas 11 pts) = white space of 7 pts.

(5) No coding is required in front of the (i), (ii) etc. group as the **Bil**0306 is still set from the '(a)' signature. However, a second indention following the '(i) group' has to be built which will accommodate the widest of the signatures and allow a reasonable space following it. An additional consideration is that these must align on the right and therefore white space in units must precede some of the '(i) group' to compensate for differences in sizes:

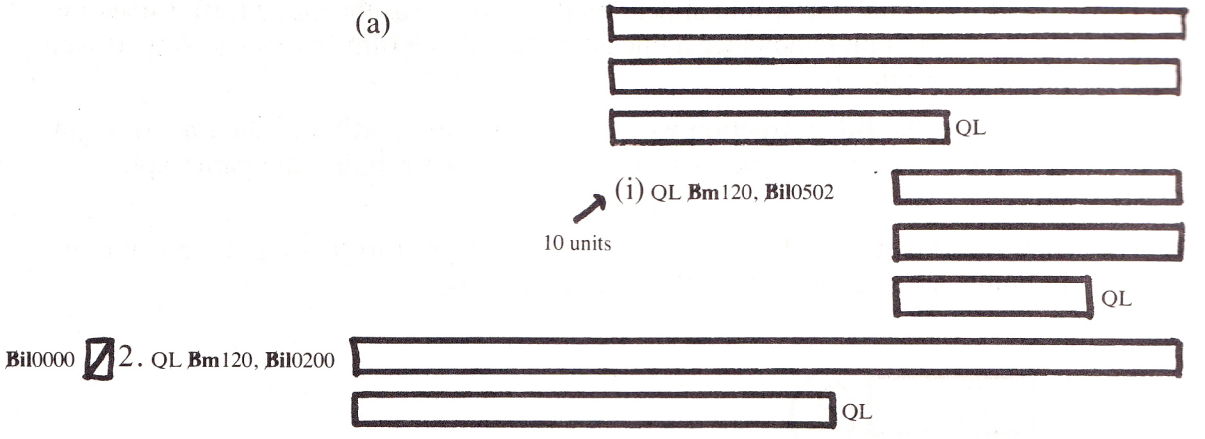




Each group now adds up to 36 units when all the spaces and characters are toted up. 36 units = 18 units twice. As there are 18 units in one em of set and the em of set is equal to the point size, then, 2 x 10pts. = 20pts. or *one pica and eight points.*

The **Bil** following all of the above is therefore the existing indent of 3 picas and 6 points plus the space for the signature of 1 pica and 8 points. The total indention required following the '(i) group' is therefore **Bil**0502. *Remember* the unit values of space *before* the '(i) group' signatures must go in if they are to align on the right. The 9 unit value following may be ignored as it is simply an aid in calculation.

The coding required to achieve a third level of indention is therefore:



Using the information in this lesson, now set the copy following. Note: The spaces to be placed in front of '(i) group' signatures is very important as this style of setting is most commonly used (right alignment of roman figures). Use memory storage where possible.

Note:

There are other methods of achieving the above results; however, to avoid confusion this is the only one to be included in this manual.

SELF TEST

Write conditional control commands and required formats for the following indention cases using the condensed versions:

(1) Three lines to be full measure followed by a five pica indent left for a further four lines; followed by a return to measure for six lines; followed by a right hand indention of six picas for 7 lines; followed by full measure to the end.

(2) Two lines to be full measure followed by a further six lines indention on the right eight picas; followed by two lines full measure; followed by a 4 pica indention on the left of 3 lines; full measure to the end.

(3) A column of typesetting is to be keyboarded with 2½ points space between each paragraph. Write the format to be stored and the conditional control function to achieve this automatically on encountering the Quad Left command.

(4) Explain how a string of information to be stored may exceed the normal format length of 40 codes.

Objective 21

The Conditional Control Function

The conditional control function is achieved by use of **Ƀw**0000 which is really *two* instructions in one command. The first two digits following the **Ƀw** instruct the output to set the number of lines indicated. The second two digits instruct the V-I-P to refer to a format in which the operator has previously stored further instructions, e.g.

Ƀw0244

This instruction would mean typeset 2 lines and then typeset according to the information in **Ƀqu**44.

Problem

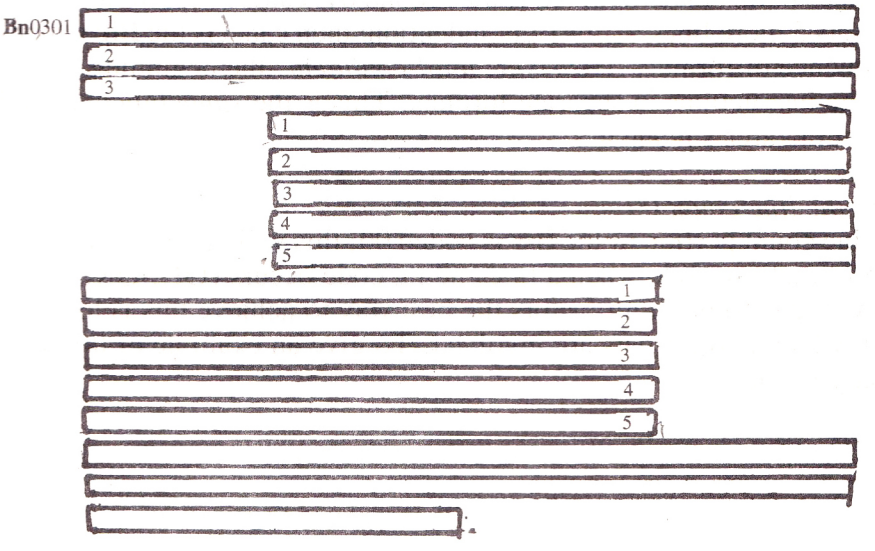
A piece of text is to be set which requires 3 lines to be typeset full measure and then 5 lines to be typeset indented on the left 6 picas followed by a further 5 lines to be set indented on the right 6 picas; the remainder of the job to be full measure. The typesize is 10/10 Times Roman, 24 picas. Before reading the answer, below, study the blem and attempt to solve it using the **Ƀw**. This will require the storing of more than one memory format.

Answer

The problem is solved in the following manner: three formats are used. These are fed into the V-I-P prior to the job.

Ƀqs01 **Ƀil**0600 **Ƀw**0502 **Ƀqe Ƀs**
Ƀqs02 **Ƀil**0000 **Ƀir**0600 **Ƀw**0503 **Ƀqe Ƀs**
Ƀqs03 **Ƀir**0000 **Ƀqe Ƀs**

The type parameters are then entered as **Ƀp**10 **Ƀf**100 **Ƀ**1 **Ƀl**2400.
The only instruction now required is a **Ƀw**0301 immediately prior to the text. The way the above works is as follows:



In the diagram above the operator has first prepared the three formats to be stored as aforesaid. The conditional control instruction is now keyed (**Bw**0301) and from then on the copy is treated as straight text. This is what occurs: The V-I-P on reading the tape first recognizes the **Bw** instruction which says first typeset three lines of type *and then* access format **Bqu**01. The V-I-P then indents 6 picas (which is the first instruction in **Bqu**01) and then recognizes instruction two of this memory which is **Bw**0502. Again, the V-I-P now typesets according to this instruction. It assembles 5 lines according to the indention previously recognized before going to the second part of this **Bw** which is format **Bqu**02. The first instruction of this second memory is **Bil**0000cancelling **Bil**. The second instruction is **Bir**0600 which sets up the V-I-P for a 6 pica indention from the right margin. The machine now reads in **Bw**0503 which instructs it to set 5 lines before proceeding to **Bqu**03 (note that the cencellation of **Bir** is placed in **Bqu**03 rather than included in **Bqu**02). This format merely cancels **Bir** and the V-I-P then continues to typeset uninterrupted to the end of the job.

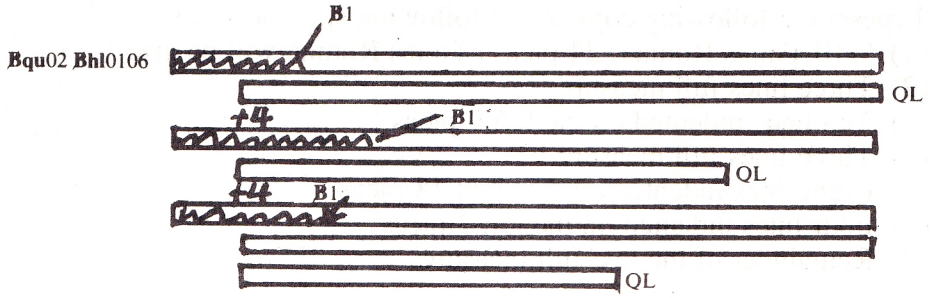
Economising on formats used
If the *format use* code portion of the **Bw** is the format number *in which* the **Bw** instruction occurs, the next instruction in the *same* format will be accessed on completion of the line count. Using this knowledge the three formats of the above problem can be condensed into one.

e.g. **Bqs**01 **Bil**0600 **Bw**0501 **Bil**0000 **Bir**0600 **Bw**0501 **Bir**0000 **Bqe Bs**

NOTE:
The contents of this new format 01 exceeds the normal format length of 40 codes by three. This is quite ok if format 02 is *not* being employed for anything. It is possible to have formats of far in excess of 40 providing format storage numbers are far enough apart. They can spill one into the other.

Each time the V-I-P is referred to format one after the first acess it automatically skips over information already used. In other words it begins by setting up the **Bil** of 6 picas; sets 5 lines to this indention; reads the second 01; cancels the **Bil** and sets-up for a **Bir** of 6 picas; sets 5 more lines to this right indention; then cancels the **Bir** which is now the end of the sequence of formats. However, *until confident*, the beginning operator should break down the instructions in separate formats. This is the *same function* as the return code in the manufacturer's manual.

Coding the line count 00
If the line count portion of the **Bw** is coded 00, this will cause a link to the format specified by the format use code when a line ending code occurs (QL, QR, QC, ELEVATE). However, due to program factors the best way to achieve this is to construct a memory loop in which two formats are involved. To give an example of this we will use a typical Glossary set-up.



In the above diagram, the typographer desires a fixed 4 points space between paragraphs and a Bold Face run-in. The **Bw** enables the operator to achieve both of these merely by striking the normal end of paragraph Quad Left instruction. Two formats are written:

(1) **Bqs**01 **Bm**040. **B**3 **Bw**0002 **Bqe Bs**
(2) **Bqs**02 **Bqu**01 **Bqe Bs**

and the text setting is begun by recalling 02 (**Bqu**02).

From this point on, each time the operator strikes a *Quad Left* key to end a paragraph format 02 is *automatically* recalled which in turn recalls format 01 within which is a 4 point paragraph space instruction and a change to Bold Face instruction (**B**3 in this case) *and* a re-entry of **Bw**0002 (thus ensuring its continued operation). The operator's task is reduced considerably: the instructions he inserts are shown in the above diagram.

NOTE:
In practice it has been found that storing the **Bw** within a format prevents many possible hang-ups. Therefore we recommend that even in the case of the line count version of **Bw** the initial **Bw** prior to the text be stored within a **Bqs** location and recalled by **Bqu**.

Objective 21

Typeset the following copy to the following specifications:
(1) 9/10 Times Roman, 24 picas (Times Roman will be grid 1)
(2) Three lines full measure
(3) Ten lines indented on the left 9 picas
(4) Three lines full measure
(5) Eight lines indented on the right 18 picas
(6) Four lines indented on the left 3 picas
(7) Remainder of the text full measure

NOTE
Only two **Bqs** memories must be used; in other words one memory must contain all the required **Bw** instructions and the second memory will contain the **Bqu**01 to begin the sequence. The second memory must start at **Bqu**03 or more for obvious reasons.

COPY 2
Typeset the following section of a glossary using the **Bw**00 method to obtain both the paragraph spacing and the Bold typeface for the run-in.

Follow format on page 21-4

9/16
1/2400

The information in this report is condensed from approximately sixteen hours of lectures. I have attempted to give the essential points in layman's language omitting the majority of technical terms and trade names which have no meaning to individuals outside the field of phototypesetting. In addition a fair amount of generalization has been done to avoid long digressions into the many subfields of this industry. I have treated the whole as outlining the merging of computers with the typesetting field. This began with the marriage of large general purpose computers with typesetting devices with a resident computer; and finally, the combination of video display terminals, optical character recognition devices, disc and tape storage units, computers, and phototypesetting output devices into what eventually has become known as the "complete system". The conclusion of this report summarizes trends outlined in earlier reports of this nature. Throughout this work I attempt to predict the implications for the College, as to where we are headed and what fields we should be engaged in. Overall it appears that we are in very good shape for the future and we need have no fears for individuals trained in the existing facility. It would seem that the next two years ought to be ones of consolidation and development of what we have; however, it seems certain that at the end of this period we will see the development of "complete systems" at a price that will ensure their widespread use. This, in my opinion, will be the time for the College to purchase new equipment.

Result:

Equipment Projection Report

The information in this report is condensed from approximately sixteen hours of lectures. I have attempted to give the essential points in layman's language omitting the majority of technical terms and trade names which have no meaning to individuals outside the field of phototypesetting. In addition a fair amount of generalization has been done to avoid long digressions into the many subfields of this industry. I have treated the whole as outlining the merging of computers with the typesetting field. This began with the marriage of large general purpose computers with typesetting ''slave'' units; the introduction of minicomputers, eliminating the inflexibility of the big computers; the building of typesetting devices with a resident computer; and finally, the combination of video display terminals, optical character recognition devices, disc and tape storage units, computers, and phototypesetting output devices into what eventually is to become known as the ''complete system.'' The conclusion of this report summarizes trends outlined in earlier reports of this nature. Throughout this work I attempt to predict the implications for the College, as to where we are headed and what fields we should be engaged in. Overall it appears that we are in very good shape for the future and we need have no fears for individuals trained in the existing facility. It would seem that the next two years ought to be ones of consolidation and development of what we have; however, it seems certain that at the end of this period we will see the development of ''complete systems'' at a price that will ensure their widespread use. This, in my opinion, will be the time for the College to purchase new equipment.

@,06 18/180 6/2500

10/130 4/2500 @,00 text

Bold run-ins

Glosary Extract +3

Special purpose computer: a computer which is designed to cope with a limited variety of problems. Some of these devices, related to typesetting are Justape, Intertype 100, 200, and 300, Linasec and Muset. 1½ ind.

Sprocket feed: (paper tape); holes in paper tape employed only for the feeding of tape through a mechanical or optical reading device. The timing systems of some photosetting computers, however, are initiated by reading of a signal generated by the diode beneath the sprocket position. +5½

Store: a device into which data can be entered and held for later recall. A computer's main storage is usually magnetic cores or thin film. Peripheral storage is usually magnetic tape, discs and drums. +5½

Stroboscope: An intense light with a narrow peaking range of intensity which is of short duration (a few micro-seconds). These devices are used to photograph moving master images in phototypesetting equipment. +5½

Sub-routine: a routine that is a component of another computer routine Manufacturers supply a range of sub-routines which may be called during a user's own program. +5½

Result:

Glossary Extract

Special purpose computer: a computer which is designed to cope with a limited variety of problems. Some of these devices related to typesetting are Justape, Intertype 100, 200 and 300, Linasec and Muset.

Sprocket feed: (paper tape); holes in paper tape employed only for the feeding of tape through a mechanical or optical reading device. The timing systems of some photosetting computers, however, are initiated by reading of a signal generated by the diode beneath the sprocket.

Store: a device into which data can be entered and held for later recall. A computer's main storage is usually magnetic cores or thin film. Peripheral storage is usually magnetic tape, discs and drums.

Stroboscope: An intense light with a narrow peaking range of intensity which is of short duration (a few microseconds). These devices are used to photograph moving master images in phototypesetting equipment.

Sub-routine: a routine that is a component of another computer routine. Manufacturers supply a range of sub-routines which may be called during a user's own program.

Objective 22

Tabular Setting

Using the V-I-P it is possible to typeset tables having up to 20 columns, each table having a different pica and point measure. Within each column it is possible to use any typesetting mode (QL, QC, QR, Elevate); and, the instruction **Bd**. However, the **Bh** and **Bi** instructions would apply to every column and therefore having a very limited application.

Set-up procedure for column widths

Column widths are entered in picas and points (similar to line length entry). These four digit column widths must be preceded by **Bx**, separated by a spaceband, and succeeded by **By**. Note that no spaceband is placed between the **Bx** *and the first column entry* or the *final column entry and the* **By**, e.g. A table having measures of 8 picas, 3 picas, and 4½ picas would be set-up by the procedure diagrammed below:

Bx0800 0300 0406**By**

When added together, column entries must not exceed the maximum line length capability of the machine, which in most cases is 45 picas. An additional caution is that the **Bl** (line-length) measure ought to be set at the total of the column widths. In the above case **Bl**1506. This is *not* necessary but it is a safe standard practice as frequently one has to leave the tabular mode to typeset a few lines of straight, full measure, text.

Width settings of table columns may be changed only by encoding complete new values (in the above manner). **Bs** does not clear column widths.

Use tabular instruction

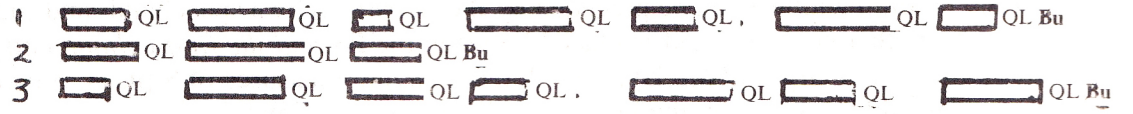
The second step in the setting of a table is to give the instruction *use tabular*. This is done by keying **Bu**, e.g.

Bx0800 0300 0406**By Bu**

Return to column one

A second function of the same **Bu** code is to cause the V-I-P to return to the beginning of the line (column one); the same basic function as the carriage return on a typewriter. Therefore, although *not* essential, it is wise to place the **Bu** at the *end of each line* as the table is being set. This eliminates the danger of "run-back" if a column should be omitted in error, e.g.

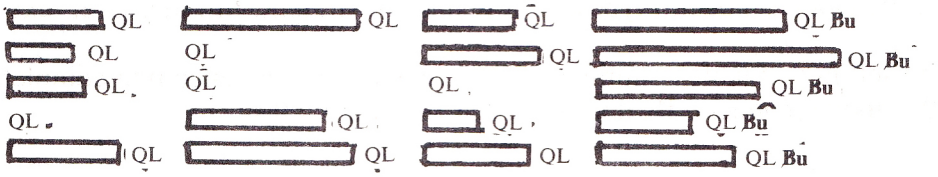
If the set-up indicates a three-column table, as the example given does. The V-I-P waits for three line ending commands before activating the film advance mechanism to create a new line. Consequently, should the operator accidentally skip a column, thereby only having two line endings, the machine will take the first column information from the next line to make up its requirement of three line ending commands to the line. The **Bu** at the end of each line eliminates this danger as it causes an immediate move to the beginning of the next line. This knowledge also helps speed up the setting of tables which have many columns some of which are only half used, e.g.



The **Bu** at the end of line 2 eliminates the need to fill out the line with QL's (in this instance) to fulfill the line content requirement of the program.

Blank columns

A column containing white space (no information) must be recognized by a line ending code (QL, QR, QC, Elevate) when it occurs in the middle of a table line, e.g.

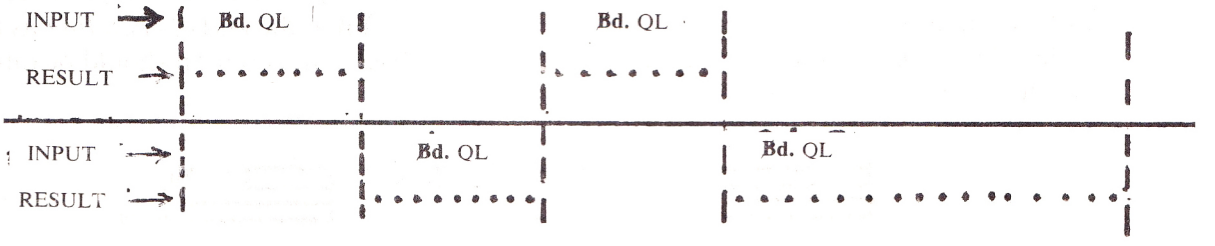


Column termination

From the foregoing it must have become obvious that columns are terminated by one of the mode codes (QL, QR, QC, Elevate). In all the above examples we have used QL.

Automatic leadering in tabular mode

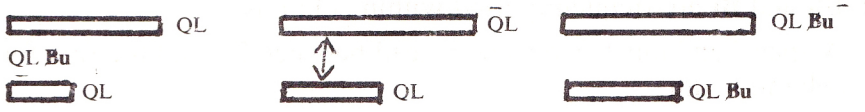
The automatic leadering function of objective 9 may be used in tabular setting but only within one column. per **Bd** instruction, e.g.



If leaders were required to cover the entire table, in the above instance **Bd**. would have to be entered in *every column*.

Supplementary film advance in tabular mode

An additional line feed greater or less than the **Bf** entry may be obtained by using the **Bm** instruction as is done in text setting. An additional line advance of the same depth as the **Bf** setting may be achieved by merely keying an extra QL **Bu** *in addition* to the normal line ending of QL (QR, Elevate) **Bu** ending a table line, e.g.

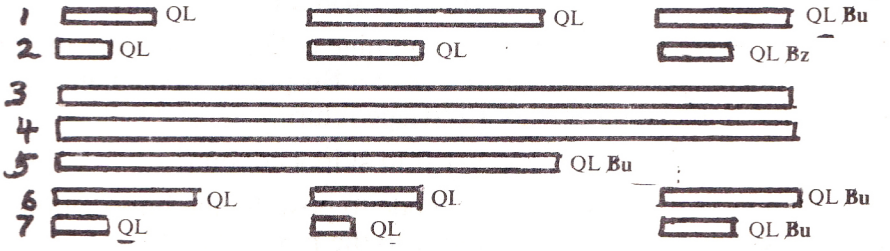


Typeface changes in tabular setting

Typefaces may be changed within tabular setting in the same manner as in text settings with the proviso that the size is compatible with the column width.

Suspend tabulation

There are many jobs which frequently require the setting of tables within paragraphs of straight text repeatedly. Here it would be necessary to pass from tabular mode to straight text and back again. To exit from tabulation the instruction **Bz** is provided. The V-I-P on encountering this instruction will then refer to the full line length measure (instead of the mini-measures making up the columns of the table). However, to re-enter tabulation one need *not* re-enter the columns widths (**Bx** . . . **By**) but merely key **Bu** and continue on with the table. One need only enter columns widths if they have changed in any way — either number or width, e.g.



The **Bz** ending line 2 above causes the V-I-P to leave tabulation for the following three lines of justified text. The **Bu** ending line 5 above causes a return to tabular mode for the remaining two lines of the table.

SELF TEST

(1) With the V-I-P 12K operating in tabular mode 20 columns possible. T F

(2) Column widths are in picas and points and may all be different. T F

(3) Elevate may be used to justify a number of words within a column. T F

(4) **Ƀh** and **Ƀi** are frequently used within columns. T F

(5) A spaceband must always be placed between **Ƀx** and the first four digit column width. T F

(6) This set-up is correct **Ƀx**0900 0506 0203 0504**Ƀy**. T F

(7) When added together column measures may exceed 45 picas. T F

(8) It is a good practice to enter a line length greater than the total column widths. T F

(9) If in item 6 above the first column width was to be changed to 0908 the entire set-up procedure would have to be repeated. T F

(10) **Ƀs** clears the column widths. T F

(11) After entering **Ƀx** . . . **Ƀy** one may immediately begin the table setting. T F

(12) It is not necessary to place the **Ƀu** at the end of thable lines. T F

(13) If the table set-up has six widths, the V-I-P anticipates six line-ending codes for each line (QL, QR, QC, or Elevate). T T

(14) In the case were a table contains, say, nine columns, but only the first two are being used for a particular line; a **Ƀu** placed immediately after the second line ending acts as a carriage return. T F

(15) A line-ending code causes the V-I-P to skip a column. T F

(16) All columns require a line-ending code to position the information within the column and cause a move to the next column. T F

(17) **Ƀd**. placed in the first column of a table would fill the entire *line* with periods. T F

(18) **Ƀd**. placed in the first column would only fill that column measure with periods. T F

(19) **Ƀm** works exactly the same as it does in straight text. T F

(20) A QL **Ƀu** following the lin-ending **Ƀu** gives one blank line. T F

(21) **Ƀz** suspends tabulation until a **Ƀu** is read. T F

Complex table involving dot leader (see overleaf) Copy 2
This assignment involves no new concepts and merely brings together all that has been learned to this point.

Some things to take note of
(1) Section headings (CREDIT COURSES FOR . . . etc.) are a point size larger than the body size.

(2) The course listings are merely a three column table with use of dot leader mode within the third column, e.g.

> ACCQL 152QL Bookkeeping **Ƀd**. EM EN 3 QL
> Produces?
>
> ACC 152 Bookkeeping 3
> Note: where a double figure occurs after the dots, one em only is necessary not 1½ as in the example above.

(3) Prior to the commencement of the tabular sections a **Ƀu** must be keyed. However, do not make the mistake of beginning the job **Ƀx** . . . **Ƀy Ƀu**. The first 5 lines are *not* a table. A wise way to handle this is to first enter **Ƀx** . . . **Ƀy** and then **Ƀz** *prior to starting* "CREDIT COURSES FOR". Immediately before the first line of a tabular section ACC etc." key **Ƀu**.

(4) For supplementary line advances use **Ƀm** throughout

(5) The 7 indented lines beginning "The Education Committee" require the use of **Ƀi**. However, a number of em spaces would serve just as well, i.e. instead of **Ƀi**0309, 5 ems of 9 pt would serve just as well. These types of indention are usually arbitrary.

(6) The folio ix at the end of the job is *not* in tabular mode.

General instructions on procedure
Careful planning is essential in work of this type.

(1) Translate all mark-up into instruction strings and store in format memory; e.g.

> **Ƀqs**01 **Ƀp**09 **Ƀf**110 **Ƀ**1 **Ƀl**2800 **Ƀqe Ƀs**

(2) Number the various strings in the order in which they occur in the text.

(3) Key the numbers to the copy where they are required.

> The above avoids cluttering the copy with long strings of codes. When a key number occurs in the copy one merely recalls the appropriate format number (**Ƀqu**01) etc.

Using table mode to create an assymetric shape Copy 3
Again, this assignment involves no new concepts, but introduces an unusual use of the tabular mode.

To reproduce the copy of this assignment would require the operator to strike about 100 instructional keys. Therefore it is advisable to store as much of the coding as possible leaving merely words and word spaces to be typeset.

Procedure

(1) Write out each parameter in the form of the keys to be struck and enter this information on the program sheet provided below.

(2) Check the formats thus written against the answers provided below the program sheet.

(3) Key a program tape from the program sheet.

(4) Write the appropriate call numbers on the copy to match the formats on the format tape.

(5) Typeset the copy calling up the formats as required.

Some things to take note of

(1) The agenda part of the advertisement is a *three column table*. The column of white space down the center is a column measure. The keyboarding procedure for a line of this table is:

Ƀ6 12.30 - 12.45 pmQR QR **Ƀ**4 IntroductionQL **Ƀu**

The first QR aligns the times at the right of column 1; the second QR is only to skip column 2 (QR is used as the operator's finger is already on the QR key); the **Ƀ**4 is to obtain Roman; the final QL is to align the word "Introduction" at the left of column 3.

(2) The line spaces between agenda items are created merely by an *extra* QL **Ƀu** following the QL **Ƀu** completing each table line.

Program Sheet Write out formats for copy 3

Ƀqs01 ..... **Ƀqe Ƀs**
Ƀqs02 ..... **Ƀqe Ƀs**
Ƀqs03 ..... **Ƀqe Ƀs**
Ƀqs04 ..... **Ƀqe Ƀs**
Ƀqs05 ..... **Ƀqe Ƀs**
Ƀqs06 ..... **Ƀqe Ƀs**
Ƀqs07 ..... **Ƀqe Ƀs**

Compare your answers above with those below

Ƀqs01 **Ƀp**18 **Ƀf**180 **Ƀ**6 **Ƀl**2400 **Ƀqe Ƀs**
Ƀqs02 **Ƀp**14 **Ƀf**140 **Ƀ**4 **Ƀm**080. **Ƀqe Ƀs** *OR* **Ƀqs**02 **Ƀp**14 **Ƀf**220 **Ƀ**4 **Ƀqe Ƀs**
Ƀqs03 **Ƀp**12 **Ƀqe Ƀs** (putting this small change in memory merely standardizes the setting procedure)
Ƀqs04 **Ƀp**08 **Ƀf**080 **Ƀx**1100 0106 1106**Ƀy Ƀu Ƀm**240. **Ƀqe Ƀs**
Ƀqs05 **Ƀz Ƀm**300. **Ƀqe Ƀs**
Ƀqs07 **Ƀp**07 **Ƀm**020. **Ƀqe Ƀs**

It should be pointed out here that the above procedure of storing all changes in format memories is only economical where there are many pages of the same format. Normally much of the above coding would be done from memory of the operator.

Make sure you fully understand the purpose of each of the instructions to be stored in the memory BEFORE commencing setting the copy provided below.

The Computer
As An Instructional Aid

Seminar

Casa Loma Campus Gymnasium

Wednesday, October 24, 1973

12:30-12:45 pm	Introduction
12:45-1:30 pm	Short talks by users from BBC, York, Humber, Seneca
1:30-3:30 pm	Displays and coffee hour
3:30-4:45 pm	Panel discussion
5-6:30 pm	Meal followed by speaker
6:30 - whenever	Social Evening
	Continuation of displays
	Bar opens

THE COMPUTER AS AN INSTRUCTIONAL AID COMMITTEE

Chairman; H. G. Coupland, Architectural Technology; Secretary; Miss M. Sheridan, Computer Services; G. Danac, Engineering Technology; E. Dunn, Business and Commerce; W. Dykstra, Electrical/Electronics; F. Engelhart, Academic Studies; K. Holmeshaw, Fashion Technology; E. Lord, TIBI; M. Rashkis, Food Technology; R. A. Santin, ESL; J. F. Stephens, Principal, Teraulay Campus, J. Vile, Applied Arts; J. Ward, Graphic Arts.

Result:

The Computer As An Instructional Aid Seminar

Casa Loma Campus Gymnasium
Wednesday, October 24, 1973

12.30 - 12.45 pm	Introduction
12.45 - 1.30 pm	Short talks by users from GBC, York, Humber, Seneca
1.30 - 3.30 pm	Displays and coffee hour
3.30 - 4.45 pm	Panel discussion
5 - 6.30 pm	Meal followed by speaker
6.30 - whenever	Social Evening Continuation of displays Bar opens

THE COMPUTER AS AN INSTRUCTIONAL AID COMMITTEE

Chairman: H. G. Coupland, Architectural Technology; *Secretary:* Miss M. Sheridan, Computer Services; G. Danac, Engineering Technology; E. Dunn, Business and Commerce; W. Dykstra, Electrical/Electronics; F. Engelhart, Academic Studies; K. Holmeshaw, Fashion Technology; E. Lord, TIBI; M. Rashkis, Food Technology; R. A. Santin, ESL; J. F. Stephens, Principal, Teraulay Campus, J. Vile, Applied Arts; J. Ward, Graphic Arts.

Objective 23

Balance Sheet Setting

Remove the copy for this assignment from the binder. A careful examination of the same will reveal that a balance sheet problem is really nothing new and consists of a table format and the use of some of the instructions previously learned both within and without this table.

(1) The heading requires the Decrease Character Width instruction and familiar parameter instructions. Supplementary film advance is used to add space between lines.

(2) The heading and body of the balance Sheet are done in tabular mode.

(a) The table consists of 6 columns: 1(0106) 2(2400) 3(0106) 4(0500) 5(0106) and (0406).

(b) In *column 1* are placed the first two paragraph signatures, quadded left.

(c) *Column two* contains the body matter of the balance sheet which requires dot leaders to fill it out (**Bd**.).

(d) *Columen three* is merely a blank column providing spacing between the end of the leaders and the first column of figures.

(e) *Columns four and six* contain the two 7pt headings centered. In addition single dash lines and double dash lines. The single dash lines are obtained by **Bp**06 **Bf**050 **B**5 **Bd** shift 8 unshift QL which causes a six point en dash of Helvetica to be repeated until the column width is filled (**Bf**050 raises the dash line one point nearer to the line above: it looks better!); double dash lines consists of the single line demonstrated above, and a second line made up of **Bp**06 **Bf**020 **B**5 **Bd** shift 8 unshift QL, raising the second line to within two points of the first line.
Make sure you understand how this sequence works.

(f) The vertical column of white space between the two columns of figures is merely column 5 (0106). However, don't forget the closing parenthesis at the foot of the column four figures (6,555). This parenthesis is QL in *column five:* it *hangs*.

(g) The figures within the columns are QR, e.g., 4,305,055QR. Note: where a $ is required on the left the sequence is *$* **Bd** *en space 266,924 QR*.

(h) Line spacing within the table is obtained by normal use of **Bm**040.

(i) The two paragraphs at the very end of this table are *not* in the table but outside of it. Don't omit the **Bz** and ensure that a **Bl**3800 has been instructed sometime previously to give full measure. Don't omit **Bil**0106 or its cancellation.

(j) Finally, the third paragraph signature (3.) must be done using the following sequence *3.QL* **Bil**0106 **Bm**100, Having. . . End each *table line* with **Bu**.

Before commencing setting this Balance Sheet, write out all instructions and construct format storages where necessary. Check with the solutions to major problems given below:

Ƀqs01 **Ƀp**06 **Ƀf**050 QL QL QL **Ƀ5** **Ƀd** shift 8 unshift QL QL **Ƀd** shift 8 unshift QL **Ƀ4** **Ƀu** **Ƀp**09 **Ƀf**100 **Ƀqe** **Ƀs**

Ƀqs11 **Ƀp**06 **Ƀf**020 QL QL QL **Ƀ5** **Ƀd** shift 8 unshift QL QL **Ƀd** shift 8 unshift QL **Ƀ4** **Ƀu** **Ƀp**09 **Ƀf**100 **Ƀqe** **Ƀs**

NOTE:
Recalling **Ƀqu**01 will give two single lines crossing both figure columns. Recalling **Ƀqu**01 followed by **Ƀqu**11 will give the double line across both columns.

Ƀx0106 2400 0106 0500 0106 0406**Ƀy**

QL

Ƀil0106 The cost of . . . commercial paper. QL **Ƀil**0000 3.QL **Ƀil**0106 **Ƀm**100, Having . . . 1974

Ƀil0000 . . . . **Ƀs** . . . . . .

@,04 GB Income Trust

NOTES TO FINANCIAL STATEMENTS - DECEMBER 31, 1974

1. Summary of the changes in issued and outstanding Trust Units:

	Year ended December 31, 1974	Period July 24, 1973 to December 31, 1973
Outstanding at beginning of period	$ 266,924	—
Issued during period for cash	4,038,131	$ 267,006
	4,305,055	267,006
Redeemed during period	226,209	82
Outstanding at end of period	4,078,846	266,924

2. The following summarizes the gain (loss) on securities sold:

Proceeds from sales of securities	100,503,582	698,319
Investments at cost at beginning of period	1,340,074	-
Cost of securities purchased	120,423,049	2,032,449
	121,763,123	2,032,449
Investments at cost at end of period	21,252,986	1,340,074
Cost of securities sold	100,510,137	692,375
Gain (loss) on securities sold	$ (6,555)	$ 5,944

The cost of securities purchased and the cost of securities sold include $102,078,940 and $94,532,777, respectively, of short-term commercial paper.

3. Having distributed its entire net income for the period which would otherwise be taxable in its hands. GB Fund Income Trust had not tax liability as at December 31, 1974.

Sample Copy 23A ("GB Income Trust . . .")

Result:

GB Fund Income Trust

NOTES TO FINANCIAL STATEMENTS — DECEMBER 31, 1974

	Year ended December 31, 1974	Period July 24, 1973 to December 31, 1973
1. *Summary of the changes in issued and outstanding Trust Units:*		
Outstanding at beginning of period	$ 266,924	—
Issued during period for cash	4,038,131	$ 267,006
	4,305,055	267,006
Redeemed during period	226,209	82
Outstanding at end of period	4,078,846	266,924
2. *The following summarizes the gain (loss) on securities sold:*		
Proceeds from sales of securities	100,503,582	698,319
Investments at cost at beginning of period	1,340,074	—
Cost of securities purchased	120,423,049	2,032,449
	121,763,123	2,032,449
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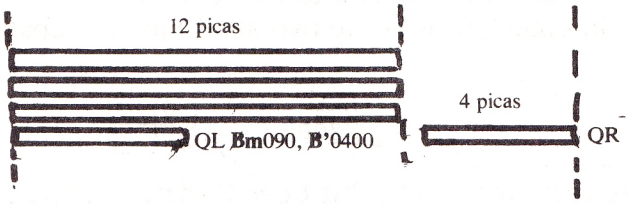
Cost of securities sold	100,510,137	692,375
Gain (loss) on securities sold	$ (6,555)	$ 5,944

The cost of securities purchased and the cost of securities sold include $102,078,940 and $94,532,777, respectively, of short-term commercial paper.

3. Having distributed its entire net income for the period which would otherwise be taxable in its hands, GB Fund Income Trust had no tax liability as at December 31, 1974.

Supplementary Line Length

This function causes an existing line length to be increased on the right for one line only, e.g.



In the example the **Bl** measure setting is 12 picas; however, the operator has inserted the **B**'0400 causing the final line to be extended 4 picas to the right. This line falls in the *same line as the paragraph ending* as a result of the **Bm**090,.

What this instruction does is to allow the operator to set justified or dot leadered matter in one column and occasionally put information in a second column to the right of it. The most obvious case where this is useful is the auto advertisement. However, as the assignment for this objective involves many previously taught instructions the Self Test will be a review of these:

SELF TEST

(1) The **Bol** creates a form of hanging indent at the point where it occurs.

(2) **Bd**. causes the remainder of a line to be filled with periods.

(3) If the **Bf** setting of a piece of text was **Bf**101 and in the last line of the text a **Bm**101, was inserted, this would cause the last line to be printed out on the same baseline as the line above.

(4) The **B'** causes a line to be extended to the right the value of its four digits, e.g.'s **B'**0306 would create an extra column on the right for that line of 3½ picas; **B'**0503 would extend the line in which it occurs 5 picas and 3 points to the right.

(5) The point size may be changed within a line on the V-I-P.

(6) The point size may be changed within the portion of a line created by **B'** settings.

(7) Having used a **Bol** to create a hanging indent **Box** must be entered at the paragraphs end to negate **Bol**.

(8) QR, QL, QC, Elevate, or **Bd** may be used within the line extension created by **B'**.

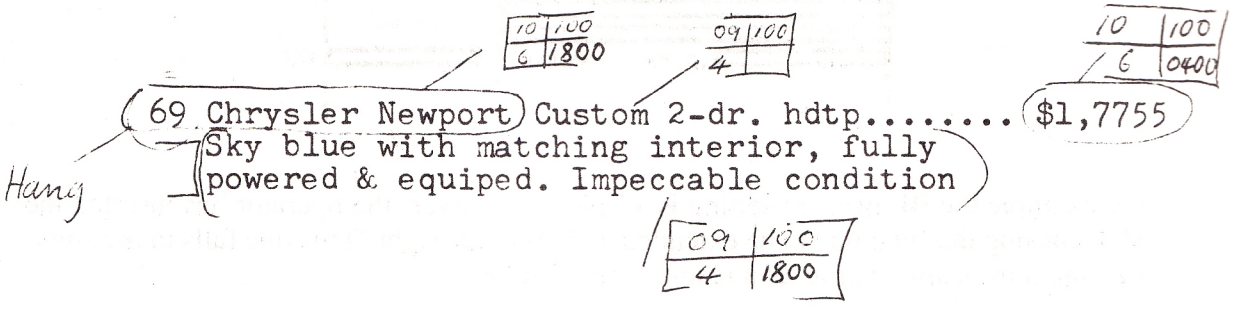
(9) If the line length setting is **Bl**2200 and **B'**0400 is encoded for one line, positioning codes and **Bd** act as if the line length *for that line* is **Bl**2600.

(10) In the example above's case the **B'** is being used to create the illusion of a second right-hand column. Therefore QL, QC, Elevate and **Bd** may not be used.

Problem

An auto ad is to be set in the following manner:

(1) Model date hanging in left margin—10 pt. boldface
(2) Model name—in same line and size as Model date.
(3) Model price—in same line as above two items but in a separate right hand column.



Coding:

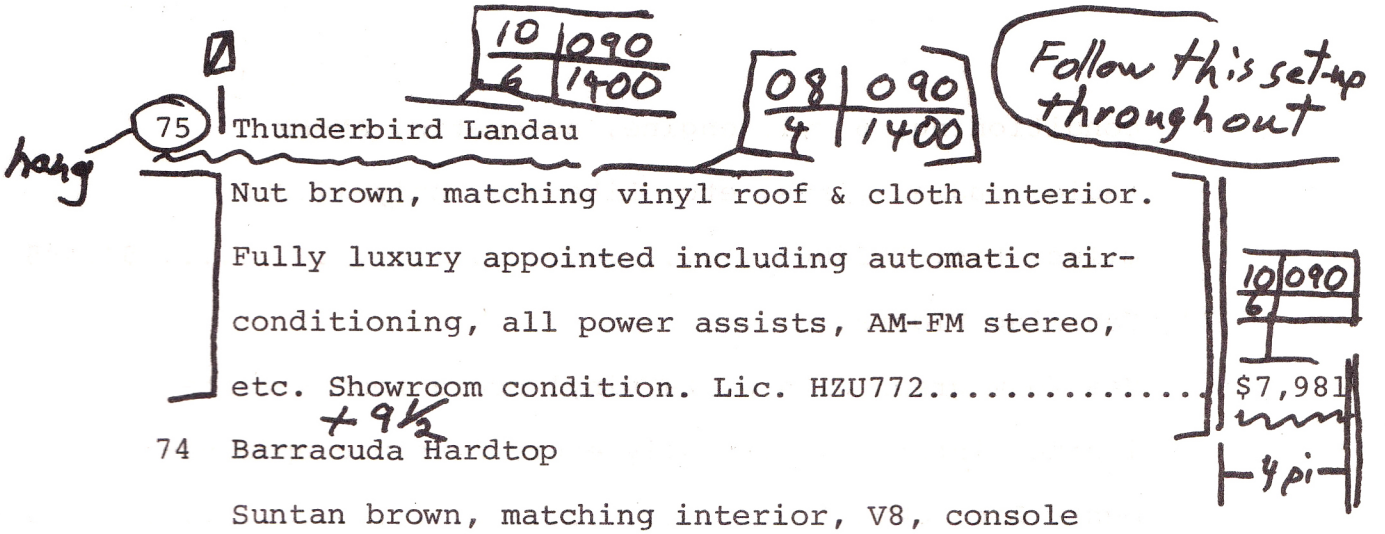
Bp10 **Bf**100 **B**6 **Bl**1800 69# **Bol** Chrysler#Newport# **Bp**09 **B**4 Custom#2-dr.#Hdtp. **Bd**. QL **Bm**100, **B'**0400 **Bp**10 **B**6 $1,775 QR **Bp**09 **B**4 Sky#blue#with#matching# interior,#fully#powered#&#equipped.#Impeccable#condition. QL **Box Bs**

Result:

69 Chrysler Newport Custom 2-dr. hdtp..... **$1,775**
Sky blue with matching interior, fully powered & equipped. Impeccable condition.

Coding to Copy 1

In your own interests, do not consult the answer given below until you have completed the coding for Copy 1.



Nut brown, matching vinyl roof & cloth interior. Fully luxury appointed including automatic air-conditioning, all power assists, AM-FM stereo, etc. Showroom condition. Lic. HZU772..... $7,981

+9½

74 Barracuda Hardtop

Suntan brown, matching interior, V8, console automatic, power steering & brakes, radio, fold down rear seat. Only 12,000 miles. Truly immaculate. Lic. JCS526..... $3,993

74 Astre Panel Delivery

Toreador red with black interior, 2300 cc engine, automatic, radio, fold down rear seat. Only 12,000 miles. Whitewalls, spotless. Lic.BMH712..... $2,323

74 Pontiac Parisienne 2-dr. hdtp.

Ermine white with blue vinyl roof & interior. Fully powered & equipped, low mileage, sharp as a tack. Lic. BLP890..... $4,300

73 Buick Apollo 4-door sedan

Azure blue with matching interior, V8, automatic, power steering & brakes, radio, etc. Outstanding condition throughout. Lic.LBN 523..... $3,464

73 Datsun 240Z Fastback

Walnut brown metallix, matching interior, air-

+ Run-in next page

conditioning, 6 cyl. engine, automatic, AM-FM radio, radial tires, etc. Like new, only 17,000 miles. Lic. DUZ406..... $4.445

73 Cadillac Eldorado

Sea foam green with white vinyl opera roof & white leather interior. Virtually every possible appointment. Lic. JWV356..... $6,868

73 Pontiac Laurentian Wagon

Pearl green finish. Fully powered & equipped including power rear window, deluxe roof rack, new whitewalls. A real beauty! Lic. BKF950..... $3,665

Result:

75 Thunderbird Landau
Nut brown, matching vinyl roof & cloth interior. Fully luxury appointed including automatic air-conditioning, all power assists, AM-FM stereo, etc. Showroom condition. Lic. HZU772 ..... **$7,981**

74 Barracuda Hardtop
Suntan brown, matching interior, V8, console automatic, power steering & brakes, radio, fold down rear seat. Only 12,000 miles. Truly immaculate. Lic. JCS526..... **$3,993**

74 Astre Panel Delivery
Toreador red with black interior, 2300 cc engine, automatic, radio, fold down rear seat. Only 12,000 miles. Whitewalls, spotless. Lic. BMH712 ..... **$2,323**

74 Pontiac Parisienne 2-dr. hdtp.
Ermine white with blue vinyl roof & interior. Fully powered & equipped, low mileage, sharp as a tack. Lic. BLP890 ..... **$4,300**

73 Apollo 4-door sedan
Azure blue with matching interior, V8, automatic, power steering & brakes, radio, etc. Outstanding condition throughout. Lic. LBN523..... **$3,464**

73 Datsun 240Z Fastback
Walnut brown metallic, matching interior, air-conditioning 6 cyl. engine, automatic, AM-FM radio, radial tires, etc. Like new, only 17,000 miles. Lic. DUZ406..... **$4,445**

73 Cadillac Eldorado
Sea foam green with white vinyl opera roof & white leather interior. Virtually every possible appointment. Lic. JWV356 ..... **$6,868**

73 Pontiac Laurentian Wagon
Pearl green finish. Fully powered & equipped including power rear window, deluxe roof rack, new whitewalls. A real beauty! Lic. BKF950..... **$3,665**

Coding stored as follows:

Bqs01 QR **Box Bm**091. **Bp**10 **Bf**090 **B6 Bl**1400**Bs**

Bqs QL Bp08 **B**4 **Bqe Bs**

Bqs Bd. QL **Bm**090, **B**'0400 **Bp**10 **B**6 **Bqe Bs**

Note, that memory one, above, contains all the coding necessary to both end the previous paragraph, cancel Bol, add 9½ points, and re-enter the necessary point size change for the following paragraph. The second memory, 03, contains the QL for the 10pt bold line and the necessary point size and typeface change. Finally, the third memory, 05, contains the dot leader instruction, including QL; negative 9 points to eliminate the line advance, the line extending instruction **B**'0400 and both point size and typeface change to complete the supplementary line sequence required. The **Bol** is put in manually, be careful not to forget it! However, it is cancelled, as said before, in 01.

You may wonder why 01, 03, and 05 were chosen, rather than, 01, 02, 03. This is merely a *good habit* and eliminates the chance of overspilling format storage limits accidentally.

Result:

Copy 2 is to be set in the same general manner as the original example of this type of setting given on page 00. However, using different parameters. Devise instructions to fit the format call numbers below. Check with solution overleaf.

COPY

CHEVROLETS

Full Size or Compact

The No. 1 car known everywhere for the smartest styling, easy service and highest value for less money. This is why they're called the working-man's car. We have them new or used. Come in today.

75 Impala 2-dr. hdtp..... $4,883
V8, Auto, power S&B, radio, vinyl roof, Lic. JFX219.

74 Vega GT..... $3,983
4 speed sport shift, radio, bucket seats, console, radial ply tires, Lic. HES087.

74 Malibu 4-dr. sedan..... $3,615
V8, auto, power S&B, radio, vinyl roof, Lic. HXR205.

73 Monte Carlo Landau..... $4,297
Coupe, air-conditioned, V8 auto, power S&B, AM-FM radio, tilt steering, bucket seats & console, ARB739.

72 Impala Custom 2-dr..... $2,995
HDTP, V8, auto, power S&B, radio, vinyl roof. Lic. ACC354.

72 Monte Carlo SPE..... $3,420
V8, auto, power S&B, radio, vinyl roof, bucket seats & console. Lic. AYE747.

70 Impala 4-dr. Sedan..... $2,298
V8, auto, power S&B, radio, vinyl roof. Lic. BHF544.

OLDSMOBILES — as above

Cutlasses - The little limousine in every way except price, or the larger Oldsmobiles that give you a lot more than size for a lot less than you'd imagine.

75 Cutlass S 2-dr. CPE..... $4,869
V8, auto, power S&B, radio, landau roof, radial ply tires, Lic. JFX218.

Format storage relating to the above assignment

Bqs01 QL **Bm**180. **Bp**24 **Bf**240 **B**4 **Bl**1800 **Bqe Bs**
Bqs03 QC **Bm**100. **Bp**14 **Bf**140 **Bqe Bs**
Bqs05 QC **Bm**030. **Bp**08 **Bf**080 **Bqe Bs**
Bqs07 QL **Box Bm**060. **Bp**10 **Bf**100 **B**6 **Bl**1400 **Bqe Bs**
Bqs09 **B**4 **Bp**08 **Bd.** QL **Bm**100, **B'**0400 **Bp**10 **Bf**100 **B**6 **Bqe Bs**
Bqs11 QR **Bp**08 **Bf**090 **B**4 **Bqe Bs**

Result:

Chevrolets

Full Size or Compact

The No. 1 car known everywhere for the smartest styling, easy service and highest value for less money. This is why they're called the working-man's car. We have them new or used. Come in today.

75 Impala 2-dr. hdtp **$4,883**
V8, auto, power S&B, radio, vinyl roof, Lic. JFX219.

74 Vega GT **$3,983**
4 speed sport shift, radio, bucket seats, console, radial ply tires, Lic. HES087.

74 Malibu 4-dr. sedan **$3,615**
V8, auto, power S&B, radio, vinyl roof, Lic. HXR205.

73 Monte Carlo Landau **$4,297**
Coupe, air-conditioned, V8, auto, power S&B, AM-FM radio, tilt steering, bucket seats & console. ARB739.

72 Impala Custom 2-dr. **$2,995**
HDTP, V8, auto, power S&B, radio, vinyl, roof. Lic. ACC354.

72 Monte Carlo SPE **$3,420**
V8, auto, power S&B, radio, vinyl roof, bucket seats & console. Lic. AYE747.

70 Impala 4-dr. Sedan **$2,289**
V8, auto, power S&B, radio, vinyl roof. Lic. BHF544.

Oldsmobiles

Cutlasses — The little limousine in every way except price, or the larger Oldsmobiles that give you a lot more than size for a lot less than you'd imagine.

75 Cutlass S 2-dr. CPE **$4,869**
V8, auto, power S&B, radio, landau roof, radial ply tires. Lic. JFX218.

Answer Key

Objective 1

(1)d (2)a (3)a (4)a (5)b (6)b (7)a (8)c (9)a (10)a (11)b (12)b (13)c (14)d (15)a (16)b (17)b (18)a (19)a (20)a

Objective 3

(a) 6/8 Times Roman 21 picas @p06 @f080 @1 @12100
(b) 7/10 Helvetica Roman 45 picas @p07 @f100 @4 @14500
(c) 9/10½ Times Bold 14½ picas @p09 @f101 @3 @11406
(d) 24/22½ Helvetica Italic 35 picas, 3 pts. @p24 @f221 @5 @13503
(e) 18/20 Times Italic 11 picas, 10 pts. @p18 @f200 @2 @12210
(f) 20/21½ Helvetica Bold 24½ picas @p20 @f211 @6 @12406

(g)	**Bp**10	**Bf**111	**B**1	**Bl**1506	10/11½ Times Rom 15½ picas
(h)	**Bp**09	**Bf**100	**B**3	**Bl**1103	9/10 Times Bold 11 picas 3 pts.
(i)	**Bp**14	**Bf**161	**B**5	**Bl**2400	14/16½ Hel Ital. 24 picas
(j)	**Bp**07	**Bf**060	**B**2	**Bl**1502	7/6 Times Ital. 15 picas 2 pts.
(k)	**Bp**24	**Bf**301	**B**4	**Bl**4409	24/30½ Hel Rom. 44 pi. 9 pts.
(l)	**Bp**18	**Bf**200	**B**6	**Bl**1111	18/20 Hel. Bold 11 picas 11 pts.

(a)

06	080
1	2100

(b)

07	100
4	4500

(c)

09	101
3	1406

(d)

24	221
5	3503

(e)

18	200
2	1110

(f)

20	211
6	2406

(g)

10	111
1	1506

(h)

09	100
3	1103

(i)

14	161
5	2400

(j)

07	060
2	1502

(k)

24	301
4	4409

(l)

18	200
6	1111

Objective 6

(1) # means space
(2) ⅄ means insert
(3) ∾ means transpose
(4) ⊙ means period
(5) @ means bell
(6) ℓ means delete
(7) ⌒ means close-up (delete space)
(8) +4 means plus four points between lines
(9) ⌐ means end line here
(10) ≡ means CAPS
(11) **Bm**121. = 12½ pts. extra lead
(12) **Bm**031. = Reverse lead 3½ pts.
(13) **Bm**001. = ½ pt. extra lead
(14) **Bm**100, = Reverse lead 10 pts.
(15) means 10/12 font No. 1 15½ picas

10	120
1	1506

Objective 8

(1)rr (2)c (3)c (4)a (5)b (6)b (7)a (8)d (9)a (10)b

Objective 9

(1) F, (2) F, (3) T, (4) T, (5) T, (6) T, (7) T, (8) F, (9) F, (10) F, (11) T, (12) T.

Objective 11

(1) B if 030; (2) B if not possible (3) B if 031; (4) B if 040;
(5) B if 020; (6) B not possible (7) B if 021; (8) B if not possible
(9) B if 041; (10) B if 060.

Objective 12

(1)c (2)a (3)T (4)b (5)b (6)b (7)F (8)T (9)T (10)F (11)a (12)T

Objective 13

(1) b; (2) b; (3) b; (4) T; (5) T; (6) T; (7) T; (8) T; (9) T; (10) T.

Objective 17

(1) **Ƀqs**01 **Ƀp**10 **Ƀf**100 **Ƀ**1 **Ƀl**3000 **Ƀqe Ƀs**
(2) **Ƀqs**02 **Ƀp**24 **Ƀf**300 **Ƀ**6 **Ƀl**3000 **Ƀqe Ƀs**
(3) **Ƀqs**03 **Ƀp**08 **Ƀf**140 **Ƀ**4 **Ƀl**3000 **Ƀqe Ƀs**
(4) **Ƀqs**04 **Ƀp**14 **Ƀf**240 **Ƀ**3 **Ƀl**3000 **Ƀqe Ƀs**
(5) **Ƀqs**05 **Ƀp**18 **Ƀf**301 **Ƀ**5 **Ƀl**3000 **Ƀqe Ƀs**
(6) JOHN DOE QC (if the name exceeds 37 characters in length use initial)
(7) **Ƀqu**03

Objective 20

(1) Store: **Ƀqs**01 **Ƀil**0500 **Ƀw**0401 **Ƀil**0000 **Ƀw**0601 **Ƀir**0600 **Ƀw**0701 **Ƀir**0000 **Ƀqe Ƀs**
Store: **Ƀqs**02 **Ƀw**0301 **Ƀqe Ƀs**
Begin tape with **Ƀqu**02

(2) Store: **Ƀqs**01 **Ƀir**0800 **Ƀw**0601 **Ƀir**0000 **Ƀw**0201 **Ƀil**0400 **Ƀw**0301 **Ƀil**0000 **Ƀqe Ƀs**
Store: **Ƀqs**02 **Ƀw**0201 **Ƀqe Ƀs**
Begin tape with **Ƀqu**02

(3) Store: **Ƀqs**01 **Ƀm**021. **Ƀw**0002 **Ƀqe Ƀs**
Store: **Ƀqs**02 **Ƀqu**01 **Ƀqe Ƀs**
Begin tape with **Ƀqu**02

(4) The **Ƀqs** numbers are merely arbitrary addressing of the memory numbers. Because of this one can start to store at **Ƀqs**01 and continue at length running into the area normally used by **Ƀqs**02, **Ƀqs**03, **Ƀqs**04 and so on. However, if choosing to do this one must avoid storing a second format in any of these areas already occupied by the information spilling from **Ƀqs**01; therefore, if the format is of, say, 90 codes one cannot store a second format in any of **Ƀqs**01, **Ƀqs**02, or **Ƀqs**03; it must begin at **Ƀqs**04.

Objective 22

(1)T (2)T (3)T (4)F (5)F (6)T (7)F (8)F (9)T (10)F (11)F (12)T (13)T (14)T (15)T (16)T (17)F (18)T (19)T (20)T (21)T

Objective 23

(1)T (2)T (3)T (4)T (5)T (6)F (7)T (8)F (9)T (10)T

the latest processes surely he has a better chance of obtaining the remaining twenty-five per cent than he has of learning one hundred per cent new knowledge of a completely unrelated field.

According to latter day philosophers, change is becoming a way of life. Indeed, change has invaded all aspects of print; but what kind of change? One set of tools has been replaced by another. Increased leisure has occurred in the form of a shorter working day; but, overtime is frequently essential to meet production needs. In the past, new innovation in communications has caused vast upsurges in production; and, undoubtedly this is occuring again. Many items, which were impossible to produce due to deadlines or perhaps there relative unimportance, will now become printable. All facets of the Graphic Arts Industry will witness phenomenal growth and printers can only benefit.

The future of any worker in any trade connected with the Graphic Arts will be directly related to his willingness to update his skills to meet this challenge; and both the employer and the employee have a responsibility to each other to make this possible.

Result:

The turn of the century saw sudden upheaval in the typesetting industry much the same as that being experienced today. Mechanical composition machines had recently been invented and threatened to create unemployment among printers. However, although some unemployment did ensue, an amazing thing happened. Instead of continuous loss of jobs more and more positions were created. The new devices were increasing rather than diminishing work. Books and other forms of printed matter were becoming cheaper to produce owing to increased efficiency. Tremendous strides in publication and readership occurred. In the years following 1900 the amount of printed material grew more than it had in the previous three and one half centuries. Mechanical composition made available books at a price the average man could afford. Prior to that time only the well-to-do could afford to purchase books produced by hand-set type. Book production was low and illiteracy widespread.

Relatively sudden technological change has struck the industry again. The same despondency and insecurity has invaded the composing room as that prevalent in the late nineteenth- and early twentieth-centuries. One is forced to ask, ''Are there any grounds to support the negative views of many of the industry's employees?''

Employers, when questioned, complain that the difficulty is not shortage of jobs due to new technology, but finding skilled people to fill positions using both new and old skills. Unions echo this opinion saying, ''There are not less but rather more jobs available today than there were in the period before phototypesetting took hold.''

In view of the above positive attitudes exhibited by leading employers and unions; why is there such negativism among workers? It appears to be the result of a widespread belief at the beginning of this era that because photocomposition used a typewriter-like device, typesetting was really merely typing. However, among the more informed people in the industry this idea no longer holds. It has become recognized that typesetting is, after all, considerably more complex than typewriting. Unfortunately, because of the oversimplifying publicity put out by some manufacturers and others, a widespread shortage of skilled help is developing. Many potential keyboard operators, and other necessary personnel, among apprentices and tradesmen are abandoning any thought of retraining. Not only this, but well-read and intelligent high school students are also tending to avoid entering a field they believe is over-automated. It is now up to manufacturers, employers, and unions to reverse this trend by informing laymen and printer alike that there is meaningful work inherent in this industry. If this is not done a chronic shortage of skilled help is likely to develop.

However, beginners should bear in mind that there is sometimes an element of truth in a rumour. The computer has successfully invaded the newspaper, book, and catalogue production industries. The skills in these areas have taken on a different form. Monotonous repetitive tasks have been replaced by computer; but, the planning skills have correspondingly increased in importance. A person employed in these fields should perhaps emphasize in his studies cold type mark-up, programming and other similar areas. On the other hand, work involving complexity, small word quantity, and variety of format is uneconomical using some of the new techniques. Because of this, considerable keyboard skill is still necessary.

Objective 3

Tape control of the V-I-P

There are four basic instructions required by the V-I-P to output type: Point Size; Film advance, Typeface, and Line length.

Point size: The point size is selected by keying **Bp** and *two digits*. The sizes available depend on the type of font grid in use, A range or B range. Throughout the manual we use only A range. The following sizes are available (make a note of them).

A range sizes: 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 27, 30, 36
B range sizes: 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 48, 54, 60, 72
Base aligning sizes: All sizes from 6 to 72

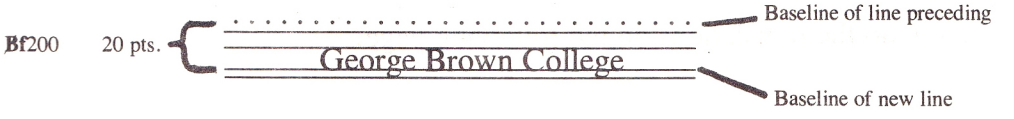
An example of a point size instruction would be **Bp**07 which causes the V-I-P-'s zoom lens to move to the position giving the 7 point typesize. Note that a zero (0) must be placed in front of the 7 to satisfy the machine's requirement of *two digits* in all point sizes. Never key **Bp**9 as this is calling for 90pt+ type which is not mechanically possible and can damage the V-I-P. B range grids are double the size of the A range grids, consequently the machine can only carry three at a time on one drum instead of six A range grids. Whereas the character masters of the A range are 12 points in size the masters of the B range characters are 18 points in size. The zoom lens system magnifies or reduces these base sizes to fulfill the point size needs as called for. The B range set up doubles the sizes obtainable in A range, e.g. instead of 6 point we have 12 point; instead of 24 point we get 48 point. However, during this first course we do not use B range.

Film Advance: A film advance setting gives spacing between lines or *leading*. It is achieved by keyboarding **Bf** and *three digits;* the first two digits represent points and the third represents one half points. A special note about this third digit. It can only be a 1 or a 0. The one means one half point; the zero means no half point. Should one keybard in, say, a 2 into the third digit spot this would mean 2 half points which is really one whole point. It makes no sense to put more than 1 in the third spot. A film advance of 10½ points would be keyed in this manner

Bf101

Once entered the film advance setting remains the same until either the operator changes it, again, by keying a new **Bf** instruction; or, the machine stops which automatically wipes out all tape instructions and reverts to the manual console settings.

On the V-I-P it is important to recognize that the film advances *before* the line of type is exposed. It is extremely important when doing mark-up to understand what this means.



In the above diagram the film has advanced from the location of the baseline of line preceding to the new baseline below. The words George Brown College are then photographed. The typeline is 10pt whereas the film advance is 20pt. Because the film advances before the line is exposed the extra 10pts of white space occurs above the type line not below it.

A new line advance occurs each time a line ending signal is recognized. This can be either on tape (QL, QR, QC, Elevate); or, internally, for instance when the V-I-P is automatically justifying raw tape. The maximum line advance possible is 99½ points.

Type face selection: The V-I-P holds six or eighteen font grids at one time. Therefore a maximum of 18 typefaces can be employed at any given time. The machine instruction for selecting one of the grids is a **Ƀ** followed by the font drum letter and a grid number, a single digit. Throughout this course we use a standard set-up which gives Roman, Italic and Bold in a serif typeface and a sans-serif typeface on one drum. Write the following list down for future reference:

Ƀ1 Times Roman
Ƀ2 Times Italic
Ƀ3 Times Bold
Ƀ4 Helvetica Roman
Ƀ5 Helvetica Italic
Ƀ6 Helvetica Bold

The A, B, or C drums are accessed as such:**ƂA** 1-6, **ƂB** 1-6, **ƂC** 1-6.

Line Length: The maximum line length obtainable on most models of V-I-P is 45 picas. The line length instruction requires a **Ƀl** (**Ƀ** letter l) and *four digits*. The first two digits are picas; the second set of two digits are points (no half points are possible), e.g.

24½ picas (**Ƀl**2406) 24 picas and six points

A measure of 10 picas and 3 points would appear as

(**Ƀl**1003)

A complete format set-up

It can be seen from the above information that the following formats (as they are known) can be translated into keystrokes quite easily:

6/7½ Times Roman
< 20 picas

becomes **Ƀp**06 **Ƀf**071 **Ƀ1** **Ƀl**2000

10/13 Helv Italic
< 11½ picas

becomes **Ƀp**10 **Ƀf**130 **Ƀ5** **Ƀl**1105

A shorthand way of writing formats:

06	071
1	2000

10	130
2	1106

Now do the translations on the following page.

Note, when keying in Ƀ instructions for this manual at least one inch of TAPE FEED should be placed between each instruction, e.g. Ƀp08 . . . . . Ƀf080 . . . etc

Objective 3

Translate the following formats into V-I-P machine instructions

(a) 6/8 Times Roman 21 picas _____

(b) 7/10 Helvetica Roman 45 picas _____

(c) 9/10½ Times Bold 14½ picas _____

(d) 24/22½ Helvetica Italic 35 picas, 3 pts. _____

(e) 18/20 Times Italic 11 picas, 10 pts. _____

(f) 20/21½ Helvetica Bold 24½ picas _____

Translate the following V-I-P parameters into hot metal mark-up, our set-up

(g)	Ƀp10	Ƀf111	Ƀ1	Ƀl1506	_____
(h)	Ƀp09	Ƀf100	Ƀ3	Ƀl1103	_____
(i)	Ƀp14	Ƀf161	Ƀ5	Ƀl2400	_____
(j)	Ƀp07	Ƀf060	Ƀ2	Ƀl1502	_____
(k)	Ƀp24	Ƀf301	Ƀ4	Ƀl4409	_____
(l)	Ƀp18	Ƀf200	Ƀ6	Ƀl1111	_____

Translate formats (a) to (1) into abbreviated mark-ups flush left

(e.g. (a) 6/8 Times Roman 21 picas)

08	080
1	2100

(a)

(b)

(c)

(d)

(e)

(f)

(g)

(h)

(i)

(j)

(k)

(l)

NOTE:

The keys struck to enter a machine instruction may be in either shift or unshift. However, *NEVER shift or rubout within a Ƀ command* with the exception of Ƀd (explained later on). Avoid setting Ƀ instructions in shift if the tape is to be fed through the CorRecTerm.

Objective 4

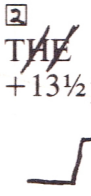
The first tape instructed job

This objective is the beginning of typesetting proper. The first assignment was merely a warm-up. From now on the amount of keyboarding is much less but the instructing from tape grows greater. However, there is nothing difficult about this and attention to the detail of coding and the development of accurate typing will enable you to gain a great deal of satisfaction from the course.

From now on each typesetting objective must be preceded by *your name, the date, and the objective number* all in *10/12 grid one, 45 picas, one line flush left.* This is known as a "catch line" and, in a plant is a valuable means of keeping track of who typeset what and when. Normally it would contain not only the initials of the keyboard operator but such detail as the typeface and measure. However, throughout this course we will follow the pattern described above. Memorize this sequence and *do it at the top of each objective.* Follow it with QL QL to give on extra line space.

Ending lines of known length

The purpose of this objective is to show you how to typeset matter where the line endings are pre-determined and done manually by the operator. Study the diagram below carefully. First notice that one of the four possible line ending commands (QL, QR, QC, ELEVATE) is required at the end of each line; secondly, the format which determines how the line will look occurs *before* the line is set; thirdly, note that when the measure is entered in the first format of a job it need not be repeated in subsequent formats as long as it remains the same. Finally, do not forget to typeset your catch-line before starting.

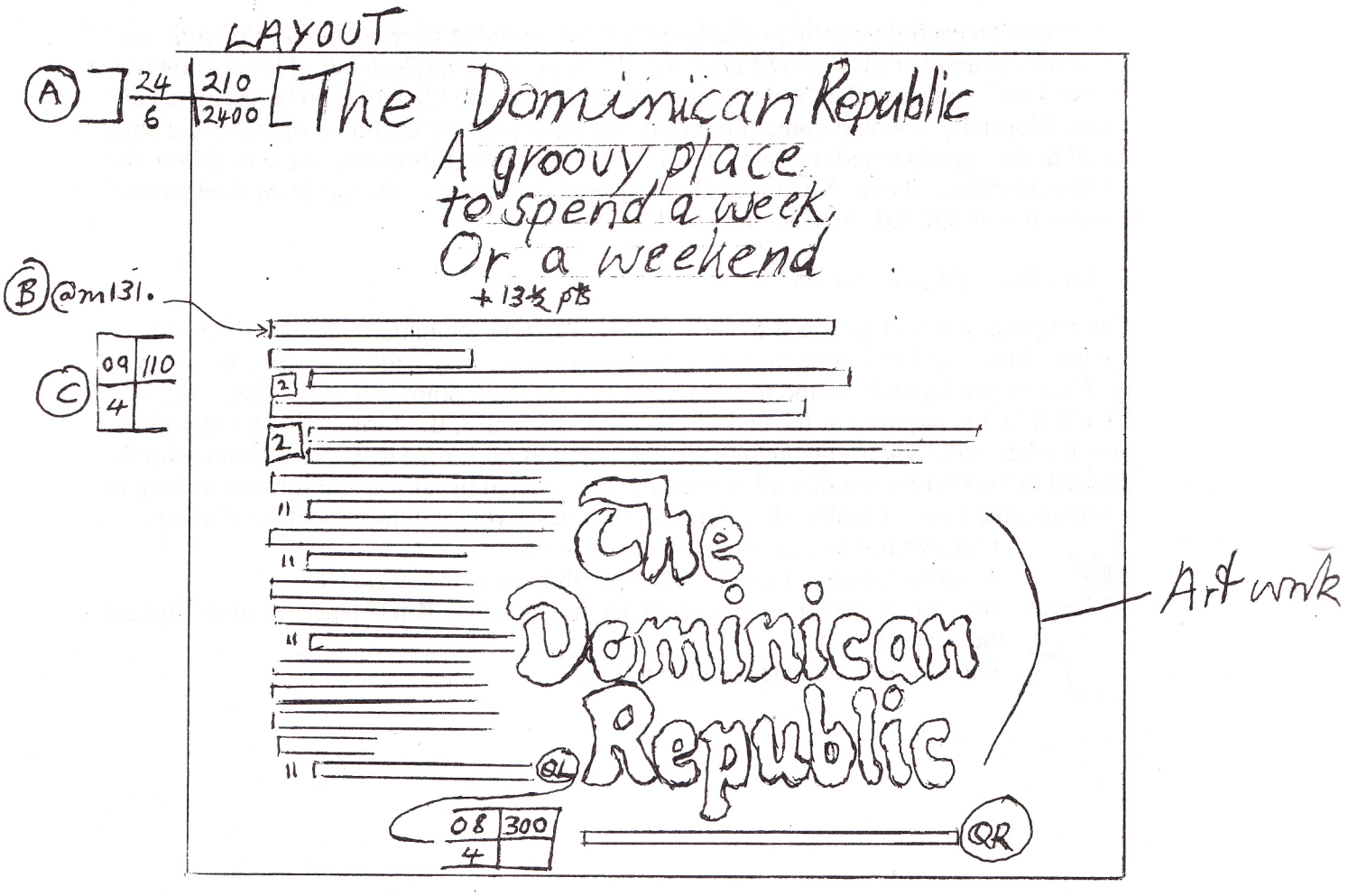


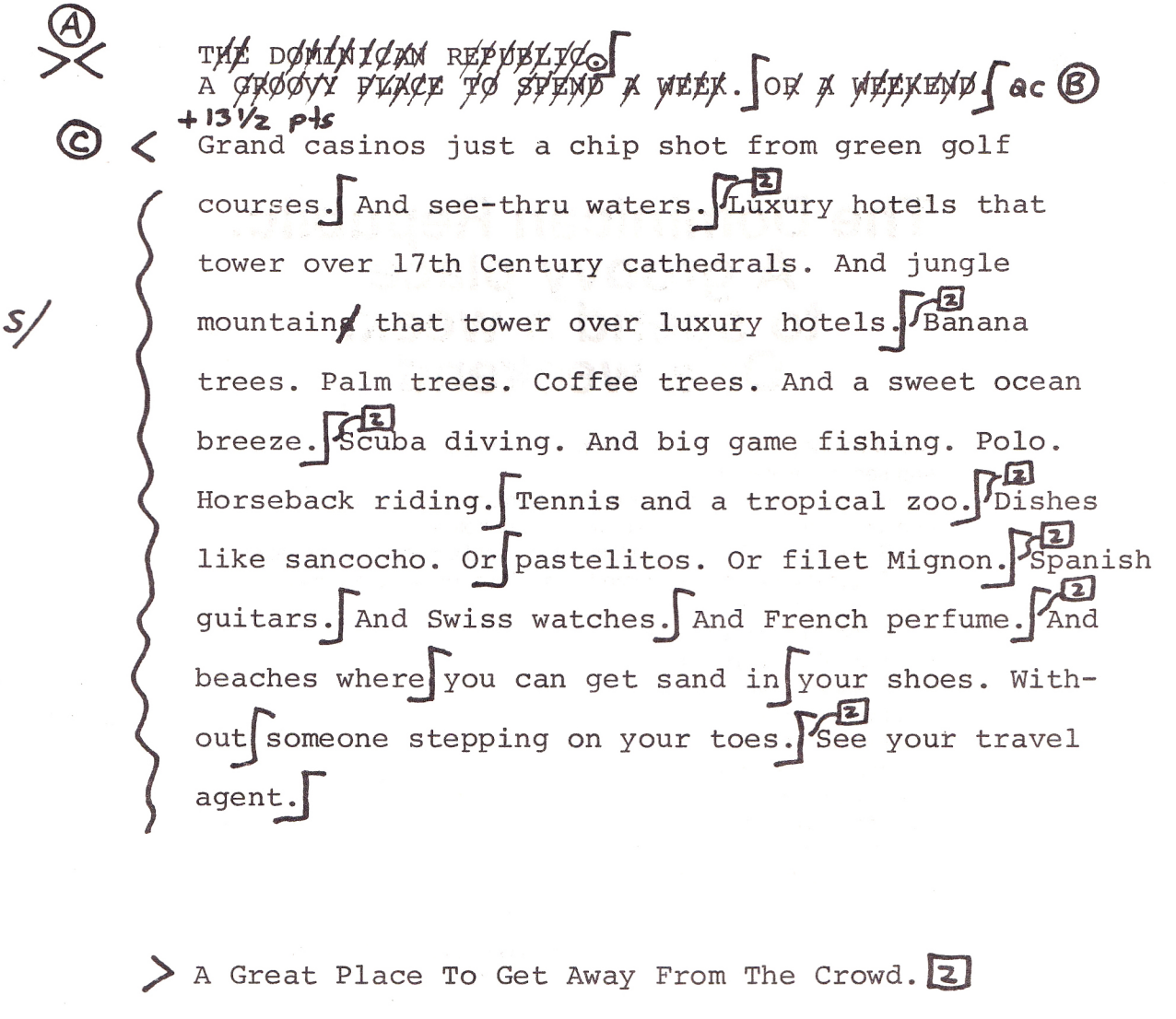
This symbol means insert two em spaces.

A stroke through a letter means put that letter in lowercase.

This means insert a supplementary line advance **Bm**131 period (don't forget the period)

This symbol indicates a line ending.


LAYOUT
A
24
6
210
2400
The Dominican Republic
A groovy place
to spend a week,
Or a weekend
+13½ pts
B @m131.
C
09
110
4
2
2
The
Dominican
Republic
Artwork
08
300
4
QR


A
THE DOMINICAN REPUBLIC
A GROOVY PLACE TO SPEND A WEEK. OR A WEEKEND. ac B
+13½ pts
C
Grand casinos just a chip shot from green golf courses. And see-thru waters. Luxury hotels that tower over 17th Century cathedrals. And jungle mountains that tower over luxury hotels. Banana trees. Palm trees. Coffee trees. And a sweet ocean breeze. Scuba diving. And big game fishing. Polo. Horseback riding. Tennis and a tropical zoo. Dishes like sancocho. Or pastelitos. Or filet Mignon. Spanish guitars. And Swiss watches. And French perfume. And beaches where you can get sand in your shoes. Without someone stepping on your toes. See your travel agent.
S/
A Great Place To Get Away From The Crowd.

Result:

The Dominican Republic. A groovy place to spend a week. Or a weekend.

Grand casinos just a chip shot from green golf courses.
And see-thru waters.
Luxury hotels that tower over 17th Century cathedrals.
And jungle mountains that tower over luxury hotels.
Banana trees. Palm trees. Coffee trees. And a sweet ocean breeze.
Scuba diving. And big game fishing. Polo. Horseback riding.
Tennis and a tropical zoo.
Dishes like sancocho. Or
pastelitos. Or filet Mignon.
Spanish guitars.
And Swiss watches.
And French perfume.
And beaches where
you can get sand in
your shoes. Without
someone stepping on your toes.
See your travel agent.

A Great Place To Get Away From The Crowd.

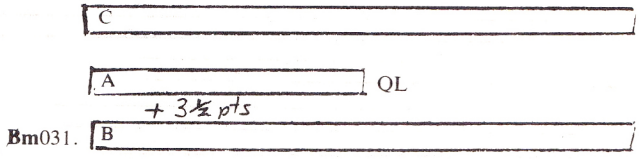
Objective 5

Supplementary spacing and typeface changes

Typesetting frequently requires the setting of blank space between lines or paragraphs. If a mere line of white space is needed, an extra QL, QR, QC, or Elevate code will create such a space by advancing the light sensitive paper an amount equal to the **Bf** in use at that time. However, in this objective the above method is too rigid as a number of advances different from the **Bf** setting are required.

Supplementary line advance

This instruction is brought into operation by the following sequence **Bm** three digits *and* either a *period* or a comma. When followed by a period the three digit value is *subtracted* from the **Bf** setting in use at that time. For now the only one that concerns us is the (**Bm**000.). The first two digits represent points and the third represents either 0 half points or one half point. Notice in the diagram below that the **Bm**instruction is placed immediately before the start of line B and following the QL of line A. Why? If you recall, extra space in a line advance appears above the line to which it is added. Therefore to get the extra 3½ points between the paragraphs above, the **Bm**031. must go at the beginning of the line labelled B so that it will be added to the line advance of that line. If, in error, the **Bm**031. was placed before the QL signal the extra space would occur between the lines C and A. *Do not forget the period.* The **Bm** instruction *cancels itself* at the end of the line in which it occurs.



Typeface changing within lines

This procedure can best be demonstrated with an example:

B3 **Art Director B**1 THOMAS S. HUESTIS QL
B3 **Managing Editor B**1 CYNTHIA KELLOGG QL

Note that the typeface change signal **B**3 (or **B**a3) or **B**1 is placed immediately before the words to which it applies. The following copy has been typed to be as close as possible to what the job will look like. However, a couple of deliberate errors have been made to enable you to recognize common mark-up signs. These are

Set in capital letters
Set in boldface
Set in lowercase
Period
Set in italic
Delete
-- Means one em dash *not* two hyphens. (↑figure 8↓)
Close up, no space
Run-on (include in same line).
Start new paragraph

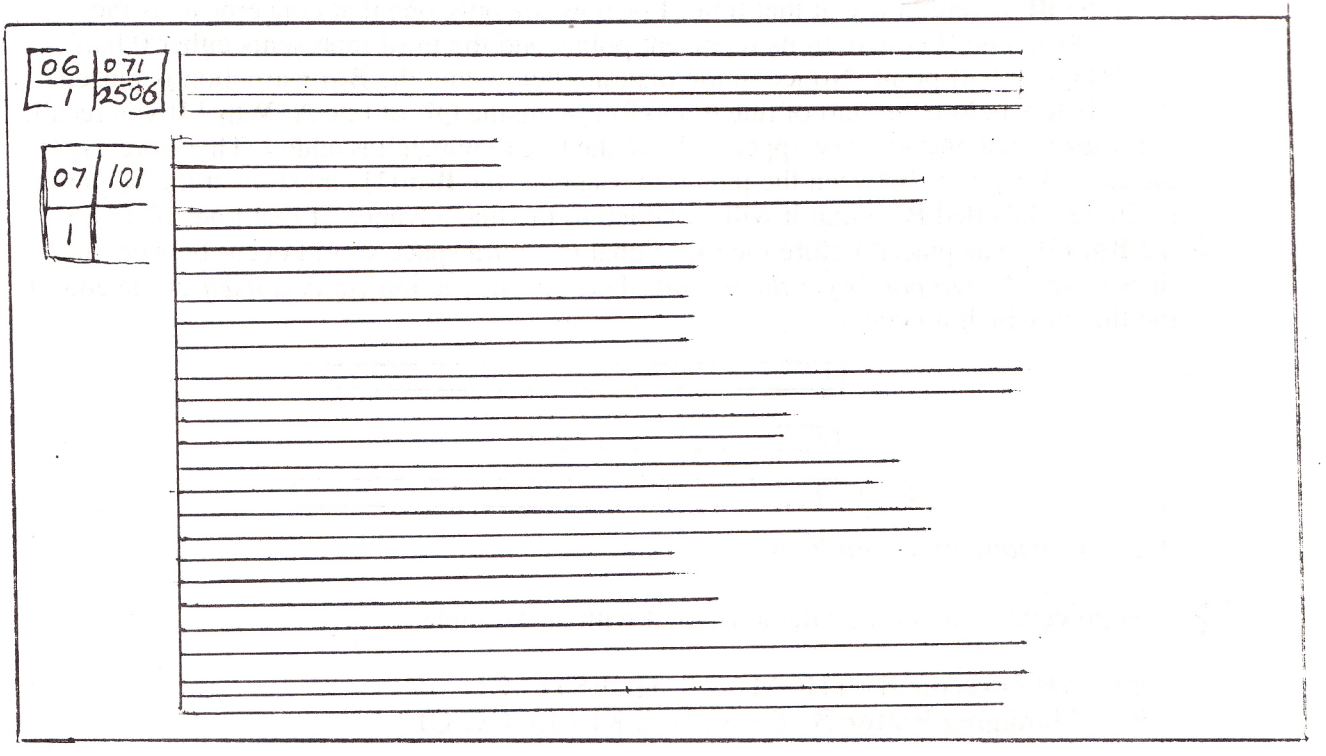
Finally, one em (mutton) *dash* occurs in this copy between the words "VENTURE — The Traveler's World." This is obtained as follows

↑ figure 8 ↓

Do not under any circumstances use the hyphen, which is adjacent to the letter p, in place of a mutton dash (18 unit dash).

Objective 5

To follow a layout



OTO

PHOTOGRAPHERS AND artists. COVER: Xograph photograph by Visual Panographics, Inc. ENDPAPER: Frank Stevens II INSIDE PAGES: chas. b. slackman, 9; Tibor Hirsch, 17; James Barkley, 65 and 87 through 91; Rafael Palacios, 90 (map); Margaret Coro, 92. QL

+12 pts

COWLES COMMUNICATIONS (from here flush left line for line)

GARDNER COWLES Editorial Chairman William ATTWOOD

Editor in Chief

VENTURE--The Traveler's World

Editor CURTISS ANDERSON

Art Director THOMAS S. HUESTIS

Managing Editor CYNTHIA KELLOGG

Senior Editor GARRETT OPPENHEIM

Senior Articles Editors JOHN F. BAKER EUGENE J. WALTER JR.

MAYA YATES Service

Assistant Art Director WILLIAM S. LEFT

Assistant to the Editor PATRICIA BROWN

Picture Editor NANCY KELLY

Art Associate JOHN BROGNA

Result:

PHOTOGRAPHERS AND ARTISTS. COVER: Xograph photograph by Visual Panographics, inc. ENDPAPER: Frank Stevens II. INSIDE PAGES: chas. b. slackman, 9; Tibor Hirsch, 17; James Barkley, 65 and 87 through 91; Rafael Palacios, 90 (map); Margaret Coro, 92.

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Assistant to the Editor PATRICIA BROWN

Picture Editor NANCY KELLY

Art Associate JOHN BROGNA

Objective 6

REVIEW

Complete the following test without looking at the answers given below. Mark the test yourself and if satisfied do the assignment following.

TEST

(1) means _____
(2) means _____
(3) means _____
(4) means _____
(5) means _____
(6) means _____
(7) means _____
(8) means _____
(9) means _____
(10) means _____
(11) **Bm**121. = _____
(12) **Bm**031. = _____
(13) **Bm**001. = _____
(14) **Bm**100, = _____
(15) means _____

10	120
1	1506

Objective 7

Kerning by machine instruction

This assignment contains only one machine instruction that you have not encountered before. The Ƀ comma (Ƀ,) instruction for kerning. Kerning is the reduction of space between *letters*. The way that Ƀ, does this is to reduce the width of the character or its escapement. Two digits must follow the Ƀ, and these represent 9ths of one point. Therefore Ƀ,09 would instruct the V-I-P to reduce following characters' widths by one point each. The machine will continue to do this until it reads Ƀ,00 which cancels this instruction. Throughout this course the full instruction will be written before lines or words to which it applies. However, *you* must remember to cancel the instruction unless for some reason we include it. It is only meant to apply to the *line before which it is written.*

e.g. Ƀ,04 GEORGE BROWN COLLEGE (place the cancelation here) Ƀ,00 of Applied Arts and Technology

When typesetting check both the layout and the copy for machine instructions as sometimes instructions may be placed on one but not the other.

This assignment constitutes a complete review of the main objectives up to this point. Remember you, *not the V-I-P*, are making the line breaks.

When the kerning instruction Ƀ, is placed near to a mark-up, this means that it applies to all type in that face and size.

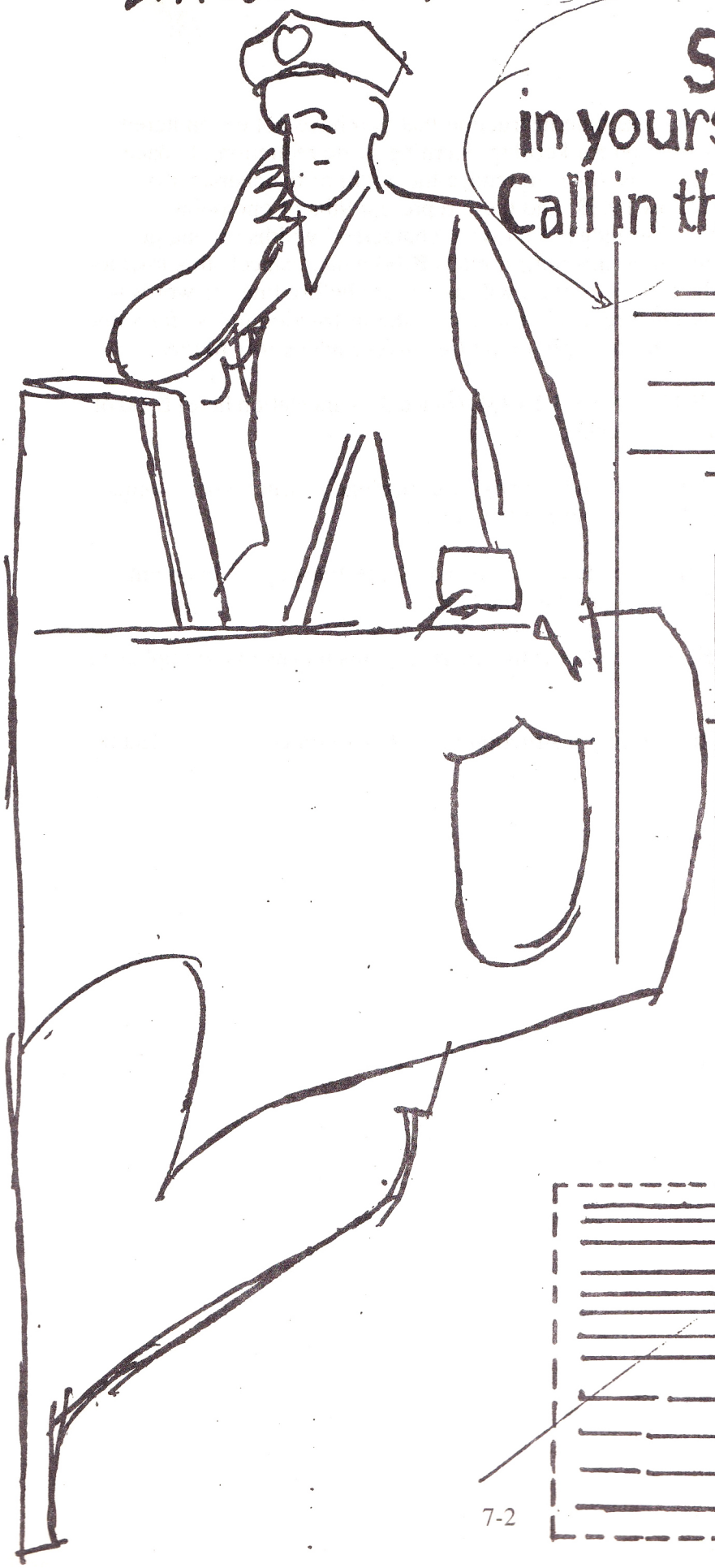
Note: Do not forget to cancel the kerning instruction *immediately* on completing data to be kerned.

LAYOUT ONLY

see copy for kerning

heading only

Seal up the holes in your security system. Call in the professionals.



the professionals

SEAL UP THE HOLES IN YOUR SECURITY SYSTEM.

CALL IN THE PROFESSIONALS

Why let hard-earned profits slip away through gaps in your security? Plug those gaps with a custom-tailored program from Secur Co. the professionals.

As the oldest and largest security agency, we have a full spectrum of security specialists who've dealt with every problem in the book.

People with the know-how and experience to tailor the most effective protection for your security dollar, whatever your special problems.

Guards, male and female. Inspections at specified after-hour intervals. Thoroughly trained personnel backed by the best supervisory ratio in the industry.

The broadest selection of cost-cutting security equipment available. From sophisticated closed-circuit TV systems to the latest sensory devices.

Confidential investigations to end your internal dollar drains. Pilferage. Lax supervision. Sabotage. Drinking or drug abuse.

More than a dozen offices across Canada to assure multi-facility firms a consistently high level of security.

Many Canadian companies specify Secur Co. professional protection. Find out how we can plug <u>your</u> profit drains, probably at a lot lower cost than your present security force.

Result:

Seal up the holes in your security system Call in the professionals

Why let hard-earned profits slip away through gaps in your security? Plug those gaps with a custom-tailored program from SecurCo the professionals.

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